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COUNTING SALMON WITH A FLASH-GUN—Fisheries Research Institute photo taken with underwater flashlights and automatic camera to tally migrating salmon as they enter a Bristol Bay lake system. Story on page 18.

A MILLER FREEMAN PUBLICATION

Steer clear of engine wear...use TYDOL HD

At dockside or sea, get complete protection from *all four* types of engine wear with Tydol HD. Its fast detergency action gets rid of sludge and grime that cause abrasive wear...and it frees sticky valves and rings, keeps engines *clean.* Tydol HD's inhibitors stop shut-down and running wear caused by rust and corrosion, protect cylinders and bearings 'round-the-clock. Its tough film lubricates instantly...you start faster–smoother and avoid warm-up wear. For more time at sea...less in repair...get the motor oil that *cleans* as it *protects* as it *lubricates...Tydol HD.*

3 GREAT OILS for Heavy Duty Marine Serv

100% paraffin base high V.I. motor oils, scientificall compounded with selected additives for heavy dut

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TYDOL HD S-1—*Higher detergency* ...for hard, h marine diesel service; for any engine subject to conti overloading.

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ol. 53 No. 6

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A MILLER FREEMAN PUBLICATION

North Pacific Research Program Laid Before Commission Advisors

Research programs proposed for the 1955 season as the United States' participation in scientific study of the problems before the International Pacific Salmon Fisheries Commission were laid before the commission and its advisory board at an April meeting. (Picture on Page 17.)

Scientists who will participate in the several phases of the work explained the problems as they appear after some months of study, the tremendous areas which must be covered and odds which must be faced. Work is expected to be underway in some quarters by the time these words are printed.

Beside the numerous scientific problems, at presstime for this issue there also remained a fiscal problem—how the scientific studies are to be financed.

At the time of the meeting it was anticipated that allocation of funds would be announced almost momentarily, perhaps from funds available under the Saltonstall-Kennedy Bill. It was recognized, however, that it might be deemed desirable to defer actual announcement until after the first meeting of the Saltonstall-Kennedy advisory committee, which Secretary of the Interior McKay has called to meet in Washington April 28 and 29.

This year's program of research on the problems raised under the North Pacific Treaty will include:

1. Studies of salmon in an effort to distinguish between stocks of Asian and American origin, by means of:
   (a) Studies of body form and structure;
   (b) Studies of scales;
   (c) Studies of blood types;

2. Research seeking to trace by tagging the routes and spawning destinations of salmon taken on the high seas.

3. Oceanographic investigations seeking possible relationship between ocean movement, temperatures, densities, salinities and other physical factors and the schooling, feeding and migratory habits of the salmon.

4. Research seeking to develop the life history of the King crab.

The advisory board generally indicated approval of the program, although some members privately questioned the advisability of such heavy emphasis on the oceanographic phase of the research program at this time.

The meeting was the first for John H. Clawson of Anchorage, Alaska, appointed to succeed Governor B. Frank Heintzleman, who accepted the position when the commission was organized last year with the understanding that he would serve only until another Alaskan could be selected.

Mr. Clawson showed keen interest in the work of the commission, and remained in Seattle for a week after the meeting, studying the various research projects and familiarizing himself as fully as possible with every aspect of his new responsibility.

Ecuador "Throws the Book" At Freezership "Arctic Maid"

● A thumping fine of $43,481 was levied against the American freezership *Arctic Maid* by Ecuador in April on charges that the vessel had violated her territorial waters, although the vessel was reported to have been 35 miles offshore at the time.

This fine exceeds the aggregate of all others which have been levied by Ecuador and Peru against American vessels during the campaign of recent months against the activities of American fishing vessels on the high seas off the coast of South America.

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Adams recognized this fact many years ago. That's why Adams Best seine twine is made of specially selected cotton...with all waste removed...and with nothing but the longest, strongest fibres left in. This superb fibre is first spun into yarn. Then under rigid inspection, it is converted into finished twine. It is here that Adams quality is superior in every way. Under a special process Adams sees that every fibre is so well BALANCED that you get full strength from every fibre. Now you can see why Adams honestly gives you longer net life with less repair. Add to this Adams 100% even mesh with perfect machine-tied knots and you have the most profitable net on the market today. Make your next netting Adams Best.

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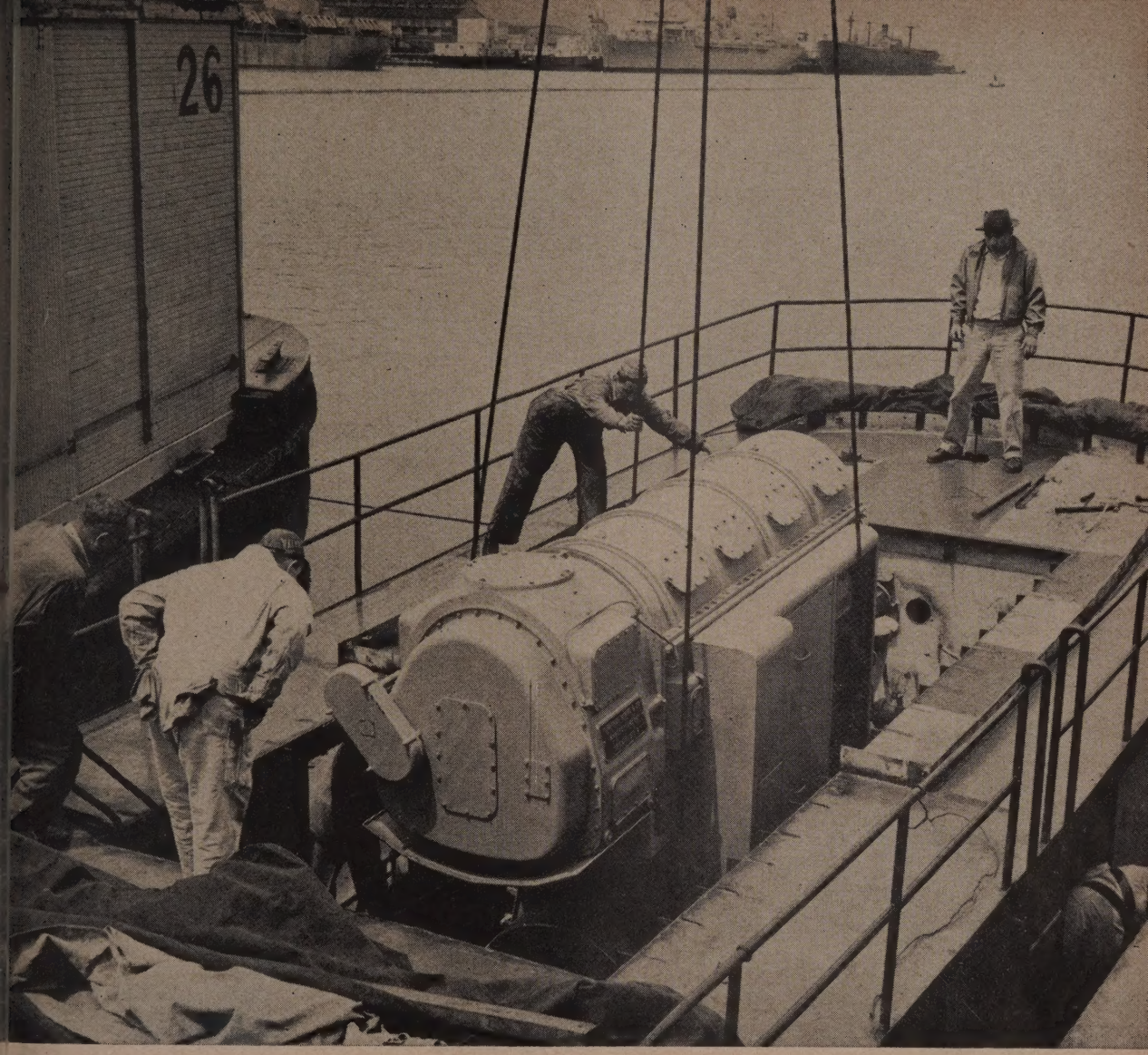

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A 150% increase in power—and room to spare.

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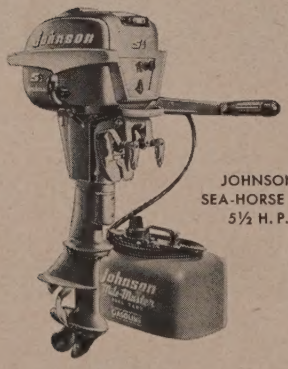
JOHNSON SEA-HORSE LOST IN 10 FEET OF SALT WATER FOR EIGHT MONTHS... RUNS PERFECTLY!



JOHNSON
SEA-HORSE 5½
5½ H. P.

Salvage operators, Joseph Wellman and Ralph Biddle, of St. Petersburg, Florida, tell an amazing story about the Johnson Sea-Horse they use in their salvage work. It lay on the bottom of Tampa Bay for 8 months—so covered with barnacles and sea growth it was virtually unrecognizable.

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That was 4 years ago. *The Sea-Horse has been running sweetly ever since—and doing the job better than any other motor tried!*

"We need a motor that runs smoothly, and keeps running, at extremely slow speeds. We have been able to achieve this type of performance only from your Johnson," states Joseph Wellman.

Johnson Sea-Horses are DEPENDABLE. Ask any commercial boat owner. Better yet, see your Johnson Dealer. Look for his name under "Outboard Motors" in your classified telephone directory.

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SEA-HORSE 25 Electric Starting	25 hp ... $525.00*
SEA-HORSE 25	25 hp 430.00*
SEA-HORSE 10	10 hp 310.00*
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* Includes Mile-Master Fuel System.

Prices f.o.b. factory, subject to change. All ratings are OBC certified brake hp. at 4000 rpm.

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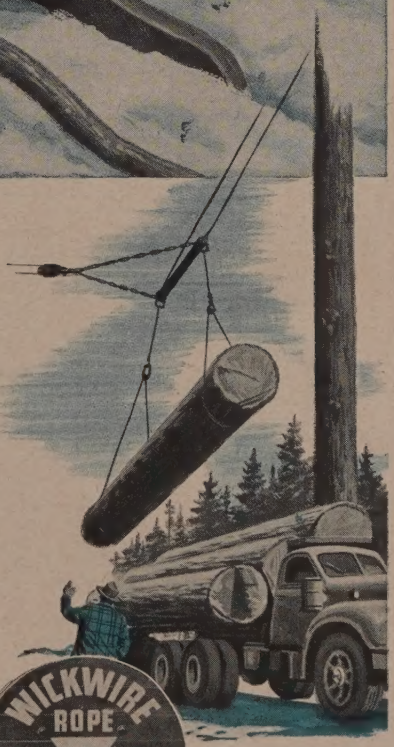
It's a job that demands *muscles of steel*—rugged wire rope that lifts and pulls the heaviest logs with strength to spare.

We of Wickwire play a big part in furnishing these *muscles of steel* to American industry. Wherever wire rope is used—timbering, drilling, construction, mining, fishing, materials handling—there also you'll find Wickwire Rope helping to do a better, more efficient job. That's the reason for the quality and extra care that go into its making.



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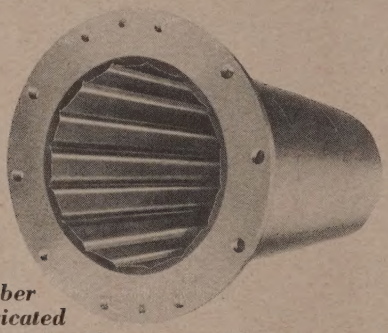
PROPELLER SHAFT

ON THE PACIFIC COAST

WISE FISHERMEN CHOOSE CUTLESS BEARINGS FOR PERFORMANCE AND ECONOMY

If you fish for a living you know the importance of dependable propeller shaft bearings. The kind that gives years of trouble-free, QUIET operation. The kind that saves shafts and keeps boat out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing —the bearing fishermen depend on to keep them fishing.



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CUTLESS BEARINGS IMPROVE THE PERFORMAN OF ANY VESSEL!

Buy them from your favorite Marine Supply House Ship Repair Yard when you haul out. Large west co stocks, popular sizes. Factory stock to 10-inch shaft available overnight by air.

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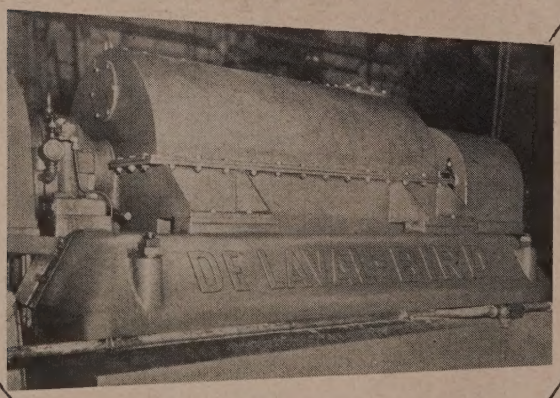

...for increasing profits!

The De Laval-Bird Meal Recovery Centrifuge handl from 3,000 to 10,000 gallons of press liquor p hour (depending on size of unit)... takes t place of 3 or 4 smaller machines...and produc *maximum* yield of high-protein low-oil meal!

The resulting economies in investment, labor a maintenance are well worth looking into wheth you're planning a new plant...or re-vamping old one. Write for full details... *now.*

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fish oil separators

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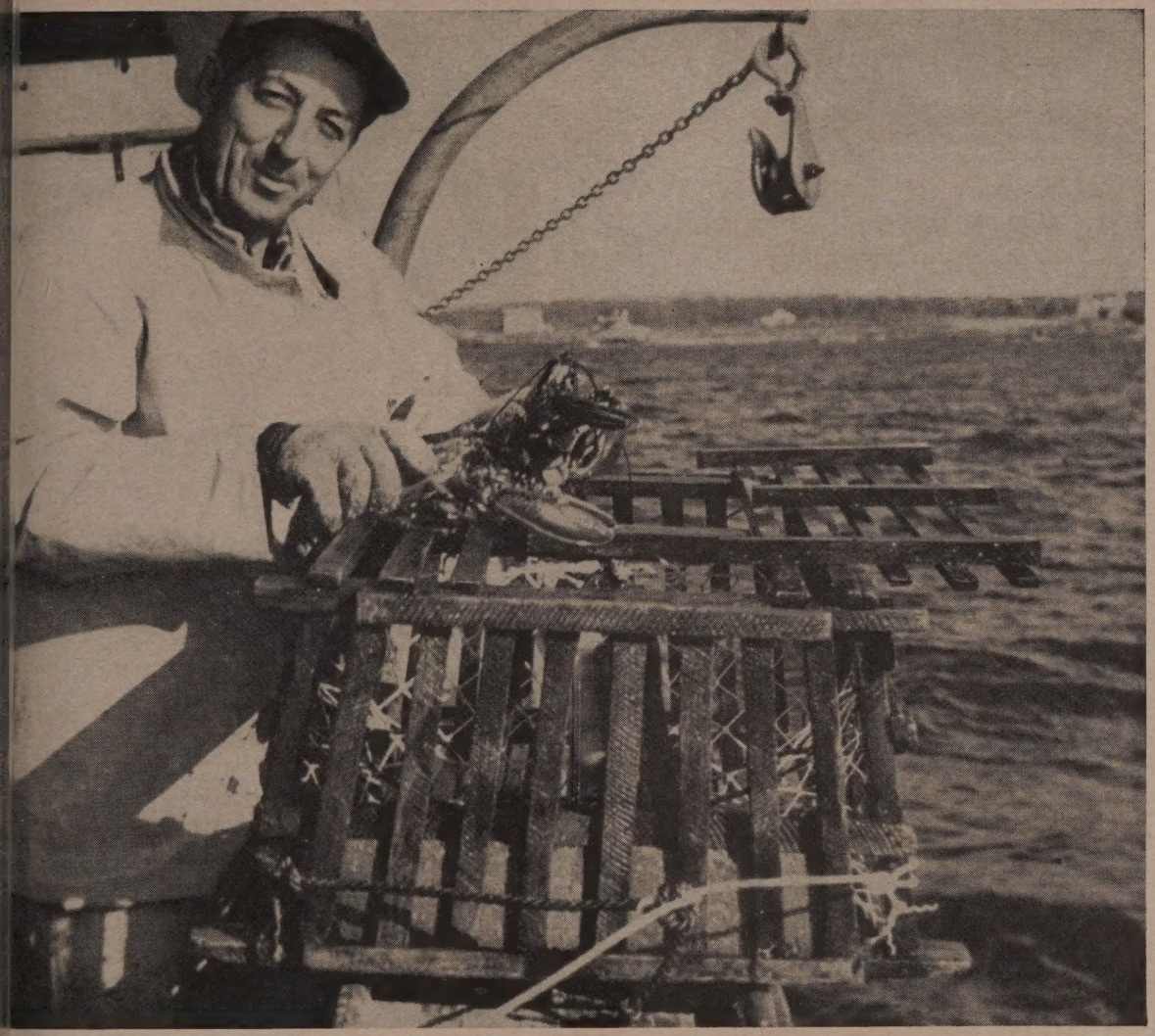

Why fishermen use

lobster heading twine of Du Pont Nylon

ore and more lobster men—like this on the Maine Coast—are enthusi- c users of Du Pont nylon for head- twine. Their reasons are best nmed up by a Rhode Island lob- r man who writes us:

"I've been using lobster-pot head- of Du Pont nylon for the past six rs. Why? Well, I operate 350 lob- r pots—with two funnels to a pot. sed to have to replace 700 funnels ry year until I began using heading Du Pont nylon. This heading prac- ally outlives the lobster pot . . . as none of the nylon funnels have worn out. I know of nothing that has made my work easier than lobster-pot heading of Du Pont nylon."

You probably know, too, that Du Pont nylon is now being used more and more for gill nets, cod ends, salmon netting, shrimp nets, trammel nets and purse seines of various types—showing how fishermen prefer the long-run economy of Du Pont nylon. Nylon nets are lightweight, yet tough and durable . . . easy to handle . . . easy to clean and maintain. And nylon nets eliminate the need for drying, can thus be fished continuously. Fishermen report reduced operating costs and more profits!

See your supplier for Du Pont nylon in netting to suit your needs. And for a free booklet on what the advantages of Du Pont nylon can mean to you, write: Du Pont N-4430, Wilmington 98, Del. (Du Pont makes fibers, not twine or netting.)

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BETTER THINGS FOR BETTER LIVING
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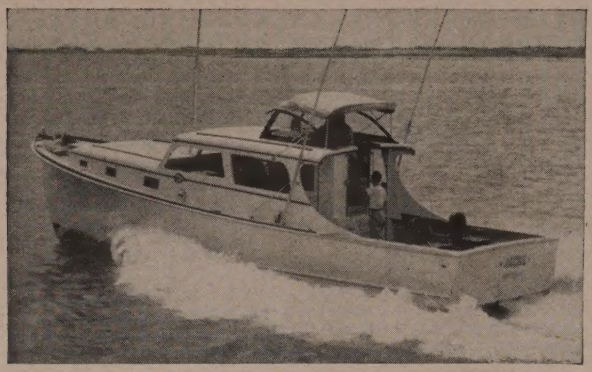

Captain Webb's "Jackbil" was built by M. W. Willis & Son, Marshallburg, N. C.

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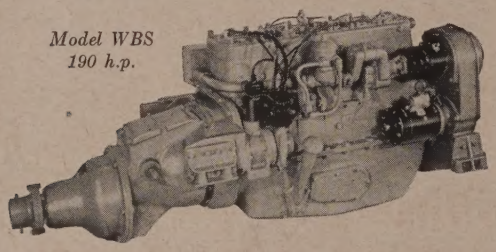
CHRIS-CRAFT MARINE ENGINES

Captain Bill Webb is well known as a sport fisherman from Ocean City, Md., to Bimini in the Bahamas. Last year, he decided to have a new fishing cruiser built, using everything he had learned in his many years of ocean fishing. Result: the 42-ft. *Jackbil* with long-leaf-pine framing, juniper planking, teak decks, all controls in semi-flying bridge with unrestricted view fore and aft — and two dependable Chris-Craft Marine Engines that provide a top speed of well over 21 mph!

Model WBS
190 h.p.



World's best buys in marine engines for commercial fishing, work or fun!

Horsepower for horsepower, you can't buy a better marine engine than a compact, power-packed Chris-Craft. *Records prove it!* For smooth, dependable power and more years of hard use at low upkeep cost, choose Chris-Craft yourself. Priced from $642, f.o.b. factory (subject to change without notice), Chris-Craft Marine Engines are available in 60, 95, 105, 120, 130, 131, 145, 158, 160 and 190 h.p., with reduction drives, opposite rotation and *Chris-O-Matic* (exclusive automatic clutch controls) for most models. See your Chris-Craft Dealer or mail coupon for catalog today!

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MARINE ENGINE DIVISION
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WORLD'S LARGEST BUILDERS OF MOTOR BOATS

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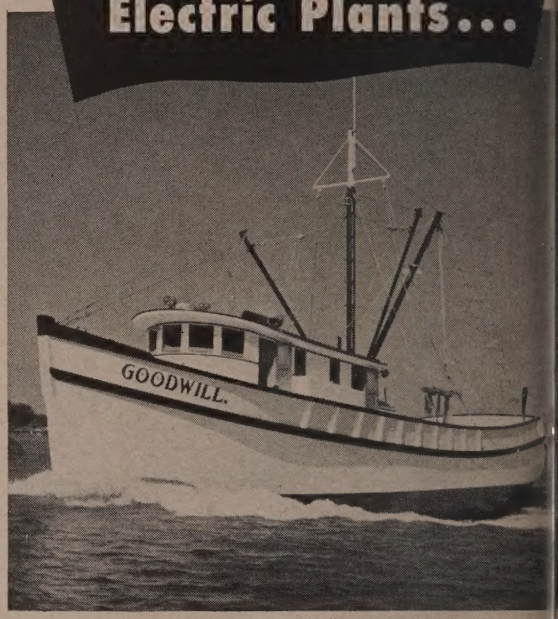

The "GOODWILL" is the 500th shrim trawler built by Diesel Engine Sales Co. All 500 have Onan Electric Plants aboard

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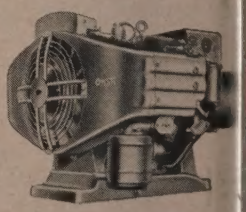
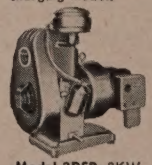
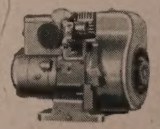
Diesel-powered—5,000 watts A.C. (shown at right), 3,000-watt A.C. and 3,000-watt, 32-volt battery charger.

ONAN Water-cooled plants
Gasoline-powered—400 to 3,000 watts, A.C., battery charging and dual-purpose models. Diesel-powered—3,000 watts A.C. and dual-purpose A.C.-battery-charging model.

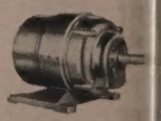




Model 3DSP, 3KW
Diesel-powered



Model 06AH, 600 watts
Gasoline-powered



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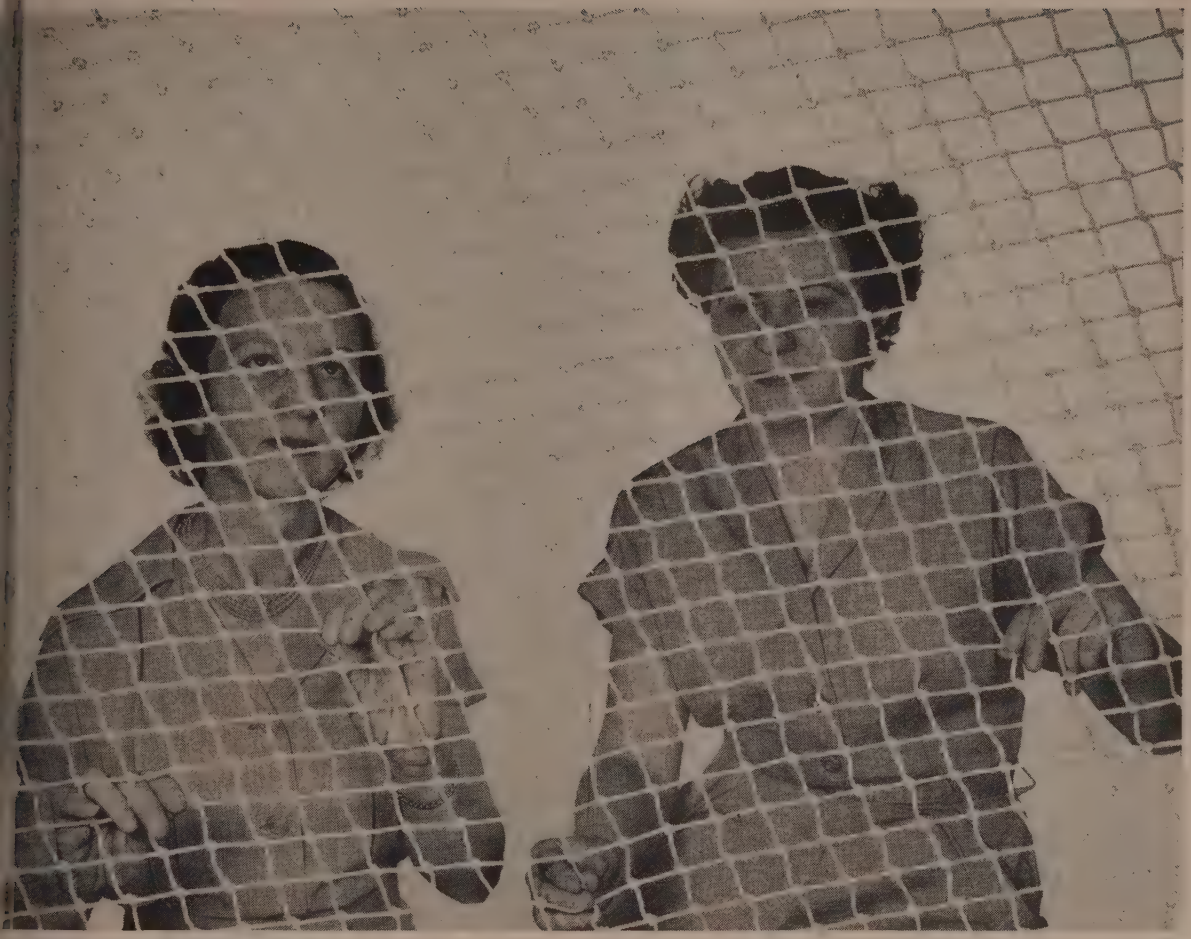

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Every net, from the finest gill net to the heaviest purse seine is given Ederer's world famous DOUBLE INSPECTION.

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If you are not now using Ederer Netting, check into it soon. Ederer netting is sold in every port where fishermen are found!

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RADIOMARINE
RADIOTELEPHONE
"Golden Herald"

Model
ET-8057

The new higher power "Golden Herald"—striking in styling—another leader in performance and design. Mahogany finish cabinet with gold-toned front panel adds richness to the interior of any craft. More channels—8 for transmitting and receiving. More power—100 watts input. Its wide 2000-3000 KC range covers standard harbor telephone and intership frequencies. An easily readable meter on front panel indicates correct transmitter tuning. Functional control grouping and separate power supply allows compact design. All aluminum cabinet construction for longer set life. 12-32-115 Volt DC or 115 Volt AC operation. See, hear—and you'll want the Radiomarine "Golden Herald" aboard your vessel this boating season.

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A SERVICE OF RADIO CORPORATION OF AMERICA
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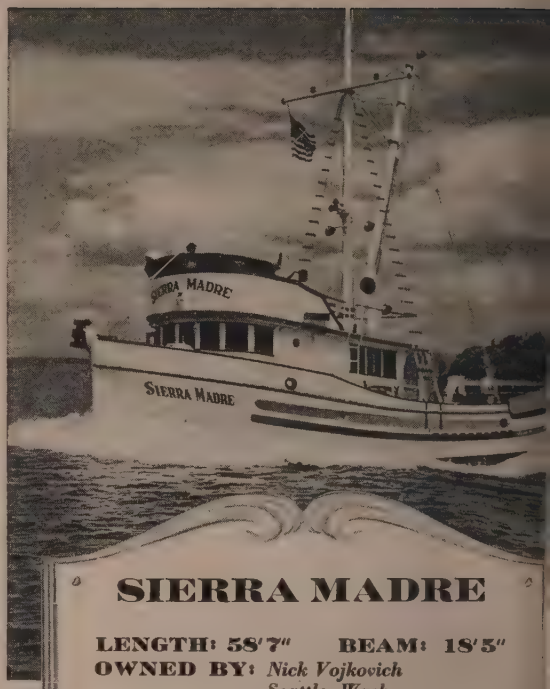

SIERRA MADRE

LENGTH: 58'7" BEAM: 18'5"
OWNED BY: *Nick Vojkovich, Seattle, Wash.*
BUILT BY: *Prothero Boat Company of Seattle, Wash.*
POWER: *260 hp. Enterprise Diesel*
SHAFT: *Monel*
RUDDER STOCK: *Monel*

Bering Sea seine hits bottom plent

...Monel shaft a must,
says Alaska owner

"We fish from Puget Sound to Bering Sea," says Vojkovich, owner-master of the seiner *Sierra Madre*. in Bering Sea we're always digging into sand and r find *I have to have* Monel to take the wear and tear.

"Monel has the durability and ruggedness for ou of fishing. It may cost a bit more, but in the long run it pays off 10 to 1!"

Monel shafts resist salt water corrosion. The superior in *strength, toughness, stiffness* and *har* to bronze or A.B.S. "Grade 2" carbon steel shaft

You can't beat Monel shafts. They *just plai longer.* Ask your boatyard to quote on *Seagoin'* next time you need a shaft.

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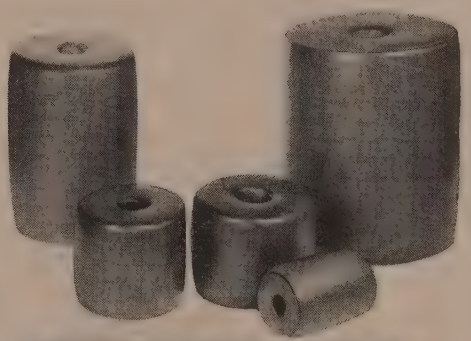

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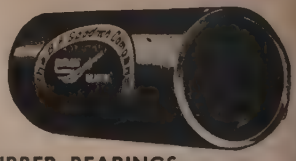
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YOUR MOVE, MR. DULLES

Seriousness of the situation building up in the ocean fisheries off the west coast of South America was heavily underlined in April, following the action of Ecuadorean naval vessels in firing upon two American fishing craft at sea 25 miles from any land.

One American, William Peck of Seattle, was seriously wounded. He was engineer aboard the *Arctic Maid*, which then surrendered and was taken to Guayaquil, along with the smaller vessel *Santa Anna*. He was subsequently flown to the Canal Zone for treatment.

U. S. Department of State, which hitherto had not acted openly in the gathering crisis over fishing off South America, dispatched two officials to Ecuador to investigate. Official statement said that sending of these men was "an indication of the gravity with which the Department of State views the incident."

A sector of the American fisheries was inclined to feel that a two-man measure of gravity was inadequate. The investigators dispatched to Ecuador were Rollin S. Atwood, director of the Office of South American Affairs; and Fred E. Taylor, foreign affairs specialist in the office of W. C. Herrington, special assistant for fisheries and wildlife.

● Opinion was widely expressed within the Pacific fishing industry that the time had come for the United States to take a firm position in the matter. In the popular mind this probably brought up recollections of the brave days of Roosevelt I and Richard Harding Davis, when the cruiser *Olympia* would have anchored in the roadstead, her turrets turned to the town — and everything would have been settled honorably in the last chapter.

That solution is a bit out of style this spring, and the Department of State to presstime had not disclosed the new look at how to protect Americans in their rights of fishery on the high seas, as the United States' policy construes them.

Only a year ago Congress passed, and the President approved, a bill which guaranteed that American fishermen interfered with while legally operating on the high seas as defined by American policy would be protected by the Department of State and compensated for damaged suffered.

This principle was proposed by President Eisenhower in 1953 when he wrote: *"It will continue to be the policy of the United States to assert the right of its nationals to engage in fishing on the high seas outside the three-mile limit for territorial waters."*

True, *Pacific Fisherman* quoted this same statement only last month. Mr. Dulles may have missed it, so we repeat it here.

● Various aspects of the South American situation have received little emphasis despite their significance.

For example, the *Arctic Maid*, Capt. Homer Kyros, and *Santa Anna* were seized earlier this spring—but that time by Peru. They were picked-up February 18 by two destroyers of the Peruvian navy, but were released shortly afterward when it was determined, according to the Peruvian press, that they "had permission to operate on the Peruvian coast."

A few weeks later they were seized by Ecuador, which maintained that they were fishing illegally, according to statement made by the Ecuadorean ambassador to the United States.

Earlier this year *Toni B.* and *Western Clipper* were seized by Peru and fined $5,000, although they carried operating permits from Ecuador.

● Practice of securing permits or licenses for operations off the coasts of other countries—for years followed in the fisheries off Central and South America — obviously constitutes a weak point in the realistic logic of the American position.

When you buy a fishing license you tacitly admit that the state from which you buy it has authority over fishing in the waters covered, even to 200 miles offshore, if the license authorizes you to fish there.

The South American nations haven't overlooked this point.

In announcing March 10 that Peru was granting authority to a Peruvian company to allow four United States vessels to operate within the 200-mile width of sea off its coast, the government-owned newspaper *La Nacion* chortled:

"Peru's 200-mile limit has again been confirmed and its basis on sound jurisprudence ratified."

Under the license, fish caught by the vessels "will be considered nationalized and there will be paid as an export tax $8 (US) per ton of fish."

● American purse seiners seized at the time of the *Arctic Maid's* original arrest in February were released rather cheaply—upon payment of $10 per ton for all fish carried at time of capture. These vessels were: *E. C. Lucido, Sea King, Miss Universe* and *Marsha Ann.*

They were operating for Star-Kist

1954 Per Capita Up .3 Lb.

America's fishing industry attained one of its primary objectives in 1954—increase in the per capita consumption of fish.

Charles D. Alhadeff of Seattle, president of Whiz Fish Products Co., when he was president of the National Fisheries Institute two years ago, declared that increasing the per capita consumption of fish in the United States was the great and challenging opportunity confronting the industry.

In 1954 consumption advanced .3 lb. from 10.8 lbs. per capita in 1953 to 11.1 lbs., according to the data developed by the Fish and Wildlife Service's analytical statisticians.

Actual consumption increased by 80 million pounds.

Fresh and frozen and canned fish products shared about equally in the per capita gain. Cured fish consumption remained unchanged. Fresh and frozen fish consumption was 6.1 lbs. per capita, edible weight basis, while canned fish consumption was 4.4 lbs.

Rapid growth in the use of fish sticks is credited by the analysts for a substantial portion of the gain in frozen fish use.

Foods interests, which have affiliations in the fisheries of both Peru and Chile.

● It is worthy of note that the vessels of the American tuna clipper fleet operating out of Southern California, and returning their catches there for canning, appear to have kept entirely clear of the 1954-55 series of incidents arising as result of the 200-mile limit imposed as result of the treaty negotiated last fall between Ecuador, Peru and Chile.

Vessels seized appear to have been operating for local delivery to South American canneries, or to freezerships for refrigerated transport to canneries elsewhere, notably the plant in Puerto Rico.

● Policy of Peru in this matter of the 200-mile zone is stated in Ministerial Resolution No. 478, which established the principle of nationalizing catches of licensed vessel and charging $8 per ton export duty. The resolution included:

"The purpose of the Supreme Government is not to impede the fishing operations of foreigners within the maritime zone under its jurisdiction, but rather to regulate them in such a way that they may be carried on under conditions which will assure the perpetual exploitation of one of the renewable natural resources of the sea on which the nourishment of the Peruvian people is dependent."

● Congress may be expected to take a hand in the South American situation—but not right now.

Senator Warren G. Magnuson of Washington is chairman of the Senate Committee on Interstate and Foreign Commerce. He quickly demanded a "high-level conference" to settle the question of seaward jurisdiction.

He's interested, but unlikely to press the matter hard at this time. A year from now would be more likely timing, as he's running again in 1956 and could do then with some national publicity and emphasis on the importance of his committee chairmanship.

In the House the Committee on Merchant Marine and Fisheries is loaded with interested Pacific Coasters, three from California and two from Washington, but none of them hold chairmanships, although Thor Tollefson of Washington is the ranking minority member.

● Unclear at presstime was the relationship, if any, of the International Technical Conference on the Conservation of the Living Resources of the Sea to the problem of South American extension of fisheries jurisdiction.

What is the ITCCLRS?

It is a meeting being held in Rome commencing April 18 in the headquarters of the Food and Agricultural Organization of the United Nations.

The meeting resulted from a resolution passed by the General Assembly of the United Nations Dec. 14, 1954, which proposed the conference as a contribution to a study of the p posals of the International Law Co mission for a program which wo establish an international fisheries thority within the frame-work of United Nations.

Member governments were invit to send "experts competent in the fi of fishery conservation and regu tion." They were warned to co equipped to spend two to three wee

Invitations to attend the conferer at government expense are known have gone to O. E. Sette, director, cific Oceanic Fishery Investigatio Dr. M. B. Schaefer, director, Int American Tropical Tuna Commissi H. O. Dunlop, director, Internatio Pacific Halibut Commission; Loyd Royal, director, International Paci Salmon Fisheries Commission; Dr. M. Chapman, director of resear American Tunaboat Association; E ward W. Allen, commissioner, Int national North Pacific Fisheries a International Pacific Halibut Comm sions; Milton C. James, director, Int national North Pacific Fisheries Co mission.

There are others, including course officials of the Department State.

Hokkaido Ports Compete For Salmon Industry

This year, for the first time, Ho kaido Gyogyo Kaisha will operate salmon mothership (without canni equipment) off the west coast Kamchatka, for which it will requ a base port on Hokkaido facing O hotsk Sea. This has resulted in sha competition between the three no Hokkaido ports—Wakkanai, Mon tsu and Abashiri. Wakkanai, is garded as having the best facilities the freezership and accompanying g netters.

Incidentally, this company will a dispatch a ship for the Aleutian a from its usual port of Hakodate.

$310 Tuna Price Accepted

At presstime in April it was apparent that the price of Yellowfin and Skipjack tuna for the remainder of 1955 would be $310 and $270, delivered by Southern California vessels belonging to the American Tunaboat Association and the Fishermen's Cooperative Association. A year ago the Yellowfin price was $350 per ton.

Westgate-California Tuna Packing Co., San Diego, and Star-Kist Foods Inc., Terminal Island, were the first to work out the new agreement. Van Camp Sea Food Co., Terminal Island, was negotiating on other phases of contract, as this issue went to pre but had apparently accepted the n price structure. California Mari Curing & Packing Company, Termi Island, was, as this issue went to pre not buying such fish.

It was anticipated that neither Van Camp cannery at San Diego the High Seas, Star-Kist affili there, would re-open within the n future. Both companies were conc trating canning at their Termi Island plants.

POFI Advisors — The Tuna Industry Advisory Committee at its meeting on the POFI Program for 1955. From the left: T. F. Sandoz, Vernon Brock, James Di Silva, Dr. Robert C. Miller, Dr. W. M. Chapman, Donald Saxby.

Electro-Fishing . . .
Electronic Prospecting
Intriguing Points in POFI Program

● *Electro-fishing for tuna, seeking means of employing a current to attract, and electrotaxis to capture, fish in the sea; and*

● *Electronic prospecting to study the behavior and migration of Skipjack schools by means of specially-adapted underwater radar.*

These are two of the exciting research proposals of the Pacific Oceanic Fishery Investigations 1955 program as approved by the Tuna Industry Advisory Committee with which C. E. Sette, director, and Donald L. McKernan, assistant director, conferred at Terminal Island, Calif., in April.

Also attending the meeting for John L. Farley, Fish and Wildlife Service director, and Arnie J. Suomela, assistant director for fisheries.

Beside accepting the POFI Program for 1955 in full, the industry advisory committee recommended augmenting the proposed Albacore tagging program by providing tagging and release of this species by both POFI and Japanese vessels in the fishing areas north of Midway Island. Under this proposal POFI would cooperate with the proper Japanese fishery research and operational agencies.

Members of the Tuna Industry Advisory Committee attending the conference included: T. F. Sandoz, president, Columbia River Packers Association; Vernon Brock, director, Hawaiian Department of Fish and Game; James DeSilva, president of South Coast Fisheries, Ltd.; Dr. Robert C. Miller, director, California Academy of Science; Dr. W. M. Chapman, research director, American Tunaboat Association; Donald N. Saxby, California Packing Corporation.

● The approved program:

1. *Equatorial Tuna*
   a. To help insure successful commercial fishing of Yellowfin in equatorial waters by ascertaining the effect of changes in weather and currents on the quantities and sizes of Yellowfin.
   b. Continue improving the steel and fiber gear used in the longline method of fishing.
   c. Estimate the contribution of the countercurrent and upwelling in the eastern Pacific to tuna production in the central equatorial Pacific by joint operations with West Coast agencies.
2. *Hawaiian Skipjack*
   a. Learn more of the off-season distribution of skipjack by sight scouting and echo ranging.
   b. Use of new electronic scanning device to study behavior and movements of skipjack schools; and experiment with tagging as means of learning skipjack migrations in the vicinity of the Islands.
   c. Complete the analysis of conventional oceanographic surveys of the waters surrounding the Hawaiian Islands and continue specialized observations on the eddy system in conjunction with (a) and (b).
3. *Bait Studies*
   a. Continue developing, with sea tests, motile lures which combine movement with appearance, taste, and smell; this to be augmented with studies of the structure and use of the tuna eye to learn more about the ways in which tunas can be attracted to catching devices.
   b. Continue studies of electro-fishing on tuna in ponds in order to design an electrical unit for sea tests.
   c. Continue observations of occurrence of live bait as opportunity affords:
      (1) In Leeward Islands
      (2) Around equatorial islands Investigate
      (3) Open-ocean saury baiting in northern waters.
4. *Albacore*
   a. Continue studies of the winter distribution of albacore and the

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...ission and Advisors—At the meeting of the American Section, International North Pacific Fisheries Commission in April. Recognizable around ...able from the left lower corner: Miller Freeman, barely showing; Robert J. Shoettler; William C. Herrington; John H. Clawson, Edward W. ... Milton E. Brooding and John L. Farley, commissioners; Clinton Atkinson, rear; Donald P. Loker; Harold E. Lokken; Robert J. Kallenberg; Vernon Brock.

... related oceanographic conditions in the North Pacific.

Cooperate with West Coast agencies in locating small albacore in advance of the Pacific Coast season and in investigating the causes of shifts in time of appearance of albacore as well as the marked change in amount taken by the Pacific Coast fishery from year to year.

... Study the summer vertical and horizontal distribution of egg, larvae and adult albacore north of Hawaii. Cooperate with oceanographic groups in U. S., Canada and Japan in a comprehensive North Pacific oceanographic and plankton survey.

... Try to catch albacore on the high seas by live bait, deep and surface trolling and longlines.

...ove to Include Pinks ... Fraser River Treaty

... Minister of Fisheries James Sinclair ... the Canadian House of Commons ...ently that he hopes arrangements ... be made next fall to include Pink ...mon under the treaty relating to ... Fraser River Sockeye fisheries—...natter that has been under negoti...on for some time.

Mr. Sinclair stressed the success of ... various fisheries treaties with the ...ited States, citing them as prece...nt for a proposal to implement the ...nvention covering the Great Lakes. ... held that Canada has done a ...retty good job" of conserving the ...heries in its own waters through the ...t 50 years, as evidenced by increas...g over-all production.

With the ratification of the Great ...kes agreement Mr. Sinclair said ...at there would be only one major ...hery of Canada left unprotected by international commission. "I refer to the Pink salmon fishery on the Pacific coast", said Mr. Sinclair. "For some time we have been negotiating to arrange a similar treaty with the Americans on this treaty, and I think that after the fishing program we have planned for this Summer we shall be able to achieve our object during the Fall."

Mr. Sinclair did not elaborate on the character of the "fishing program planned for this summer", nor on why it would tend to stimulate action with respect to inclusion of Pinks in the Fraser River salmon treaty.

Alaska Legislation Imposes New Burdens

As the 1955 session of the Alaska legislature drew to an end, it appeared that the principal new law materially affecting the fishing and fish-processing industries is an unemployment compensation act, which sharply increases the tax on employers and also levies a new ½% tax on wages received—but is so worded that most cannery employees are excluded from its benefits. Making the employer responsible for the tax on wages, it also involves a lot of additional bookkeeping.

More bookkeeping is also involved on an increased fuel tax, which is to be refunded on all except fuel used on highways.

Probably only a few fishery operators are affected by the new requirement that processors of natural-resource products (fish, minerals, timber, etc.), unless they own real property worth three times the estimated amount of their taxes, must post a bond in advance to guarantee payment of taxes.

Apparently killed was a bill to impose a steeply graduated tax on salmon catches, so drawn that it would bear very heavily on trap operators—increasing rapidly with the size of the operation—while fishermen in general would be exempt.

California Canned Tuna Pack — February, 1955

(In cases of 48s, except as indicated)

White Meat	Solid Pack	Chunks	Grated, Flakes	Dark & Light	Tonno	*Misc.	Total
1 lb.	1,272	...	...	...	...	...	
½ lb.	98,291	10,475	32,655				
¼ lb.	6,996	...		...	...		
½ lb.	...	...				4,450	
Total in ½ lbs.							**151,901**
Lightmeat							
1 lb.	244	1,787					
4 lb. (12s)	...	...	360	...	...	...	
½ lb.	35,588	134,451	39,604	1,929	3,622		
¼ lb.	10,846	8,393			†7,139		
½ lb.	...	...			...	7,767	
Total in ½ lbs.							**247,501**
Bonita							
½ lb.	...	...	789	...	...	...	789
Totals	**156,237**	**155,105**	**73,408**	**1,929**	**10,751**		**†400,191**

*Tuna specialty products converted to ½ lbs.
†¼ lb. (100s)
‡Total case pack, converted to ½ lbs.

Industry and Research — Aubin R. Bar left, president of the Alaska Packers A ation and chairman of the advisory com of the Fisheries Research Institute; Mil Brooding, California Packing Corpora chairman of the American Section o International North Pacific Fisheries Co sion; and Dr. W. F. Thompson, F.R.I. di at the Institute's research report confe in March.

How Shall We Defend the Concep Of Sustained-Yield Conservation?

● "Today's shrinking world brings to the Pacific fisheries a realistic, hard-boiled philosophy of use, a stern attitude toward conservation quite at variance with our philosophy of productive conservation, *use to the fullest extent consistent with sustained productivity*.

"The challenge is real, and it is insistent.

"The International North Pacific Fisheries Treaty marks a new era in the history of Pacific fisheries, a new era in which we must defend our philosophy of sustained use conservation if it is to continue.

"To defend it, we must have basic facts.

"We must seek those that we need; and re-examine those that we have."

● Preliminary points above were made to the American salmon industry in its Research Conference March 16 by Dr. W. F. Thompson, director of the Fisheries Research Institute, as he paved the way for twin presentations:

1. The Institute's first specific forecast.

2. A proposal for scientific testing by experimental methods of one of the vital questions of salmon biology: the relationship of escapement to return.

● *INITIAL FORECAST*—The Institute's first actual forecast of a salmon run is contained in the graphic chart accompanying this article. It concerns the Nushagak system of Bristol Bay only; and indicates improvement in the run for 1955, with prospects of greater gains the year following.

In making this forecast, Dr. Thompson and his staff emphasized that it is a "biological trial balance," the "first fruits" of the Institute's system of observation, enumeration, sampling, analysis, and interpretation. The specific steps continue under study, with continuous testing to prove and improve them.

In his discussion Dr. Thompson disclosed how the F.R.I. studies each nual run through 11 phases:

1. *Catch*
2. *Escapement*
3. *Lake Residents*
   - (a) Fry
   - (b) 1-year fingerlings
   - (c) 2-year fingerlings

F.R.I. SALMON RESEARCH TEAMS

Kodiak—
Donald Bevan
Charles Walker

Ocean Tagging—
Wallace Noernburg
Fred Thorsteinson
Allan C. Hartt

S. E. Alaska—
William Sheridan
John Martin
Howard Smith

. *Seaward Migrants*
(a) 1-year smolts
(b) 2-year smolts
. *Returning Adults*
(a) 4-year spawners
(b) 5-year spawners
(c) 6-year spawners
(d) Other ages

These phases obviously omit the an life; but this is expected to be ught under some examination in nection with high-seas tagging rk to be undertaken in connection h the Fish and Wildlife Service for American section of the Interna- nal North Pacific Fisheries Com- ssion.

NATURAL FACTORS—Of the 11 ases — plus that of Ocean life — it as pointed out that Man, as mani- st in his fishing, can influence only e first two: *Catch* and *Escapement*. Only in these two phases can *con- rvation* and *regulation* bear upon the lmon.

Members of the Institute staff dis- ssed the methods which they use in udying the 11 factors, and in evalu- ing the data. In particular, they de- eloped some of the advanced meth- ds which have been devised, as:

1. Improved methods of determin- ng age from scale samples;

2. Use of fish size to provide im- ediate age analysis of the escape- ent, where the scale structure has een erased by the processes of ap- roaching sexual maturity;

3. Use of photography to count fish ntering a lake system;

4. Prospective use of photography o determine species, sex ratio and age nalysis of spawners without hinder- ng or injuring the fish;

5. Sampling of lake residents by means of floating traps;

6. Enumeration of downstream mi- grants by means of quantitative sam- pling with fyke nets.

From these studies, with their im- proved — and improving — methods, the Institute this year produced its in- itial forecast published in graphic form herewith.

The Institute studies each run of salmon through all 11 of these phases in order to detect *when* and *where* changes—favorable or unfavorable— may occur.

"If we can pin-down the time and place of variation in the 'normal pat- tern' we can expect to determine its cause; whether it was due to the fish- ery, or to natural causes beyond Man's control."

● *TWIN ESSENTIALS*—The two es- sentials of knowledge sought by the present research work are:

1. Proper knowledge of the *age* re- lationship of the fish within the run.

2. Accurate and adequate sampling which shows the *abundance* of each age group in the run.

Importance of these two points of knowledge Dr. Thompson elaborated thus:

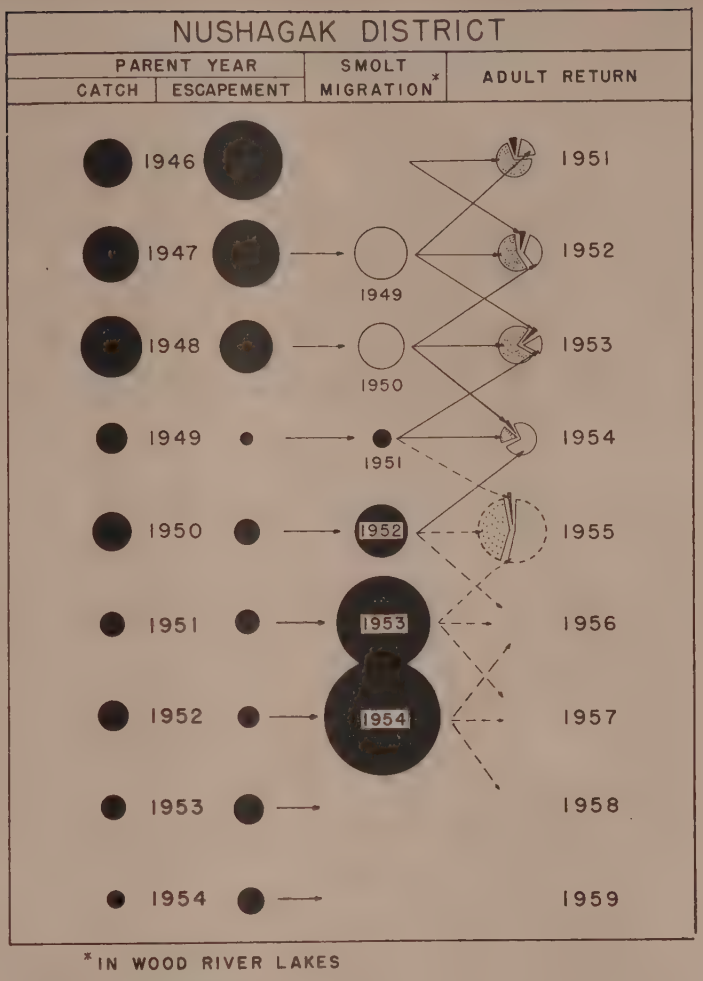
Aging—Having aged both the catch and the escapement, it is then possible to combine them and thus provide a correct measure of the abundance of each age group in the returning run. Only thus can experimental methods arrive at accurate data as to the return from a given escapement, because the fishery is highly selective as to size, sex and age.

Sampling — Assessment of the run at a single point of entry into a lake system instead of by stream and lake survey methods at a multitude of points, with high cost and low degree of accuracy is essential if the assess- ment is to be accurate and sufficient in its determination not only of num- bers but also of age — through size, species and sex.

(F.R.I. method of photographic ob- servation is illustrated in a picture re- produced with this article. The In- stitute method is believed to provide numerical counts within mathematical accuracy of plus-or-minus 10%. It is also being developed to provide sam- pling as to species and age determina- tion on the basis of size—derived from photographic triangulation.)

● *EXPERIMENTAL PROOF* — De- veloping his proposal for determining by experimental methods the true cor- relation between salmon escapement and return, Dr. Thompson declared:

"We must contrast two stocks of fish, one a 'control' and the other an 'experimental lot'—as is done in any scientific laboratory. If the control



Forecast for Nushagak—Right column of this graph reveals the Fisheries Research Institute's forecast for the 1955 Red salmon run to the Nushagak system, based upon the observed down- stream migrant populations in 1951, 1952 and 1953, projected into the 1955 adult return on the basis of the normal age com- position of the Nushagak adult return.

Bristol Bay Team—Fisheries Research Institute group specializing in the Bristol Bay problem. From the left: Ole A. Mathisen, project leader; Dr. W. F. Thompson, director; R. L. Burgner, assistant director; S. Y. Koo; John R. Gilbert.

sample and the experimental sample are both subject to the same natural conditions, then the true effect of the experimental alteration becomes obvious.

"Without such experimental control, any variation in the escapement-return relationship is lost in the multitude of naturally-induced fluctuations. Physical conditions in the spawning gravels, in the rearing lakes, in the migration routes, in the sea itself, in the rivers of return, all these mould our data and confuse the correlation. Temperature, rainfall, wind and snow; storm and drought and frost and flood play a part.

"And there are predators all the way; and competitors; and disease.

"To test the true correlation between spawning escapement and adult return we must be able to apply scientific experimental methods under uniform natural conditions of control.

"Only thus can you prove experimentally the true correlation of escapement to return."

"Only thus can you *prove* in a way acceptable to science the degree of escapement needed to sustain the fishery of any area—

"And this is something we *must* do."

● *METHOD PROPOSED* — "Devising and properly planning such an experimental program is a research problem in itself, and can only be outlined here in a tentative manner to initiate discussion of the experimental approach and how to bring it to bear. We propose two specific experiments, one for Pink salmon and the other for Red."

For Pinks, he would select two Southeast Alaska streams, close together, so the natural conditions prevailing on each would be as uniform as could be expected in nature.

In each year for several cycles, the streams would be subjected to sharp different, and alternate, intensity fishing—thus providing alternati light and heavy relative escapemen

In the case of Red salmon, I Thompson proposed that the Karl system be used; and that it be clos to all fishing during the odd-number years; and subjected to normal fis ing during the even-numbered yea which are those of the Pink salm cycle. Thus the experiment cou produce alternately light and hea escapements under conditions whi would work as little economic har ship as possible on the resident pop lation. Dr. Thompson indicated al that the salmon industry of the Ka luk district would cooperate in pr viding means of livelihood elsewhe for the Native population during th closed seasons.

The experimental proposals we not submitted in critical tone. In fac Dr. Thompson said in his introducto remarks: "We are not trying to te anyone what the details of manag ment should be, but are simply tryi to present a point of view, a philos phy of utilization and management

F.R.I. staff members who partic pated in the Research Conferenc which drew a packed house and fill the University of Washington Scho of Fisheries auditorium to the last in of standing room, were: R. L. Bur ner, Ole A. Mathisen, S. Y. Koo, Joh R. Gilbert, Fred Thorsteinson, Alla C. Hartt, Wallace Noerenburg, Do ald Bevan, Charles Walker, John Ma tin, William Sheridan and Howa Smith.

John Clawson Appointed North Pacific Commissioner

John H. Clawson, contractor and banker of Anchorage, Alaska, was appointed a member of the American Section of the International North Pacific Fisheries Commission in April.

President Eisenhower named Mr. Clawson to succeed Governor B. Frank Heintzleman of Alaska, who accepted the position temporarily early in 1954 with the understanding that he would be replaced shortly.

Mr. Clawson at one time was connected with the Glacier Packing Co. at Cordova, but has not been associated directly with the fisheries for a number of years, although maintains a constant interest in the resource as a mainstay of the Alaskan economy.

CRPA Plant Overhauled

The big Elmore cannery of the Columbia River Packers Association, Inc., Astoria, was shut down for annual overhauling during the greater part of March.

John H. Clawson of Anchorage, who in April was appointed to the International North Pacific Fisheries Commission, succeeding Gov. B. Frank Heintzleman of Alaska.

Pelican Interests Acquire Sitka Cold Storage

Interests owning the Pelican Cold Storage Co., headed by Norton Clap of Seattle, in March purchased th stock of the Sitka Cold Storage C held by August Buschmann, the esta of the late William Semar, and sever minor stockholders.

Mr. Clapp was elected chairman the board of the Sitka Cold Stora Co., and P. S. Ganty, general man ger of the Pelican Cold Storage Co became president of the Sitka com pany.

He announced that Len T. Pete son, who has been manager of th Aleutian Cold Storage Co. plant Sand Point for a number of year and prior to that time was manag at Sitka, will again manage the pla there. Mr. Ganty said that a numb of improvements are planned at Sitk designed to make the company's faci ties there more attractive to the fis ermen; and that there will also improvements in service and facilitie in accord with the needs of buye and principals.

PACIFIC Fisherman's NEWS

MAY 1955

Tuna Fleet Sailing on Contract at $310-270

Tuna bait boats and purse seiners were leaving California ports in April under a new price structure of $310 for Yellowfin and $270 for Skipjack. Price a year ago was $350 for Yellowfin.

Boats in port, waiting to unload, and those at sea, would receive $320 a ton for Yellowfin and $280 for Skipjack, according to officials of the two associations representing the two types of gear.

Bluefin, caught by net, was to sell for $310 a ton.

Westgate-California, San Diego, reopened its cannery March 21 and began to work on the loads of the *Lucy Elena* and the *Star of the Sea*. Previously, during February, it had worked for three days on the cargo of the *Mary Barbara* on a "hardship" basis, and also the *Sun Pacific*.

Scheduled for unloading at Westgate were the *Cape Beverly, Cabrillo, Victoria, Shasta, Mary Jo, Sun Ray* and *Carol Virginia*.

The big mothership *Alaska Reefer*, in which the Vilicich family has a major interest, returned from the high seas off South America in late March, and was unloading at Star-Kist No. 4 in April. Purse seiners which had delivered to her included the *California, Stranger, New Sea Rover, Jo-Ann, Western Clipper* and *American Venture*. A plane is carried aboard the Alaska Reefer for scouting tuna schools.

Another big load of tuna for Star-Kist came to Terminal Island in late March with the *Maria Ines*, returning from Peru with about 600 tons of tuna. And yet again, more tuna came to San Diego from Jack Crivello's *Puerto del Sol*, consigned to Westgate-California Tuna Packing Co. The *Del Sol* is under Panamanian registry and most of her cargo came from Paita, Peru.

In San Diego, the AFL International Association of Machinists, to which most of the tunaboat engineers belong, was asking that all union members ask their families and friends to boycott tuna canned from imports and tuna canned in Japan.

The cannery which the American Tunaboat Association had considered purchasing in San Diego, once the West Coast Packing Co. and now owned by Van Camp Sea Food Co., has been sold to the Southern California Freight Lines, and apparently no further effort on the part of the Association for purchase of a cannery is in the offing.

During March approximately 24 purse seiners unloaded at Terminal Island and 17 tuna clippers. At San Diego only three clippers unloaded.

Imports of tuna into Los Angeles harbor during March were as follows: Yellowfin from Japan, 1,147 tons; yellowfin from South America, 356; albacore, Japan, 2,659; skipjack, South America, 1,600.

The American Tunaboat Association reported at presstime that about 40 tuna clippers were still waiting in port for processing of their cargo, after weeks of idleness. It was understood that the tuna bait boats represented by the American Tunaboat Association had a 10-day limit unloading clause in the new contract which would prevent the possibility of boats lying at docks for weeks because the cannery could not handle the delivery, due to heavy inventory or other reason.

Puget Reefnets Are Limited To 19 Sound Areas

Only three of the laws enacted by the recent Washington legislature have any important bearing on the commercial fisheries.

One of them limits the operation of reefnets to 19 designated areas in the San Juan Islands district, around Lummi Island and off Cherry Point on the mainland north of Lummi.

Another, of more importance to fishermen generally, changes the expiration date of fishing licenses from March 1 to Dec. 31—new licenses to fish in any calendar year are obtainable Jan. 1, so that anyone engaging in winter fishing need not get a new license to fish in April or later. This measure also clarifies many uncertain points in existing laws.

Harry Steele Passes

Harry H. Steele, president of Seaside Fisheries Co., Long Beach, Calif., died in his sleep at his Long Beach home March 19.

Mr. Steele's activity in the tuna canning industry goes back to the early days of tuna canning in San Diego, where he was associated in the business with his father and with his brother, Paul Steele, who later became sales manager for one of the San Diego tuna canneries.

He had been active in the Long Beach cannery for many years.

New Officers of Calif. Fishermen's Assn.

Robert Austin, owner of the Albacore boat *Liny*, is the new president of the California Commercial Fishermen's Association, Inc., Terminal Island. For 1955 operations, he is assisted by Pete Repovich, of the *U & I*, vice president, and Russ Farnell, *Dorothy R*, secretary-treasurer.

New board members include: Bill Campbell, *J. B.;* Mr. Repovich; Buster Boyer, *Marietta;* Gus Johannson, *Belle J*, and Burt Gustaffson, *Bonnie Doone*.

The 110 foot M/V "Vilanova" joined the Gloucester fishing fleet in 1952. Her Enterprise DMG-6 Diesel, rated 400 HP at 400 RPM, is equipped with sailing clutch and front end power take-off for winch drive.

Vilanova logs 18,000 hours in 30 months —not a cent for repairs on her Enterprise!

Low lube oil, fuel consumption, cut "Vilanova" operating costs. Her Enterprise Diesel runs 'round the clock, averages over 14,000 BHP hours per gallon of lube oil! Fuel consumption at 20 GPH is also low, as this includes, in addition to engine operation, all fuel for auxiliary generating unit, galley stove, and the ship's heating system.

Last December the durable dragger "Vilanova" took time off for a routine checkup—the first for her 400 HP Enterprise Diesel in 2½ years.

Cylinder heads were pulled for examination, and valves were found to require only minor grinding. Cylinder liners were micrometer tested, showed minor (.004) wear—good for many more years. Except for the new gaskets installed when the heads were replaced, there has been *no money spent for parts or repairs, no engine trouble or downtime.*

This is the kind of performance fishermen in every type of fishing craft can count on from their Enterprise Engines. It's the kind of money-making service *you* will get when you switch to Enterprise, the choice of power experts. Get the facts today by writing to us at Enterprise, or by contacting the Enterprise marine diesel engineer in your area.

An Enterprise six cylinder Diesel provides the "Vilanova" with completely dependable, trouble-free propulsion power on trips to the Grand Banks that average 18 days.

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Pacific Fisherman's NEWS
May 1955 Volume 53 Number 6

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Westport Trolling Season Opens With A Bang

Salmon trolling on the Washington-Oregon coast opened March 15 with a bang, and was followed by the heaviest landings at Westport in the memory of Bert Johnston, manager of the Fishermen's Cooperative Association, Seattle, who has followed trolling activities closely for more than 20 years. Two weeks later Johnston said the landings were still holding up remarkably.

First day's arrivals at Seattle from Westport included 45,000 lbs. of Kings for the Cooperative; 5,200 lbs. large and 7,000 lbs. small for Bay Fish Exchange—increasing the next day to a total of 133,000 lbs. for both concerns. The first day's price was 51c per lb. straight, dropping next day to 36¾c, but advancing to 42¾c about the end of March.

The trolling fleet working out of Westport was said to be the largest ever seen there, numbering more than 450 boats by actual count.

Astoria also was a busy place during the weeks of preparation for the opening, with at least 150 boats outfitting at that port alone. They included more boats than usual from distant points — five were reported from Monterey Bay, several from Fort Bragg and Eureka, Calif., and at least one from Juneau. Fishing off the Columbia, however, was not productive; operations were concentrated off Grays Harbor, with most of the fish going to Seattle. Astoria prices during the first fortnight ranged from 45c per lb. down to 36c.

Improvement for Eureka Small Boat Basin

Budgeted some time ago for the current fiscal year, work was expected to start in the early future on projected improvements to Eureka's small boat basin in Humboldt Bay. The Eureka city council authorized City Engineer Stanley Roscoe to draw plans and specifications in preparation for the opening of bids for the work, at an estimated cost of $65,000.

Joseph Lockhart, superintendent of public works, informed the council that repairs to the floating pontoons are urgently needed, due to deterioriation and damage from a recent heavy gale. In addition, program includes dredging of the basin proper, which has sustained considerable sedimentation, and the diversion of run-off waters from the city which have been emptying into the basin.

Plans for establishment of a restaurant and other facilities at the basin have been deferred until the more urgently required work is completed, according to Mayor George C. Jacobs.

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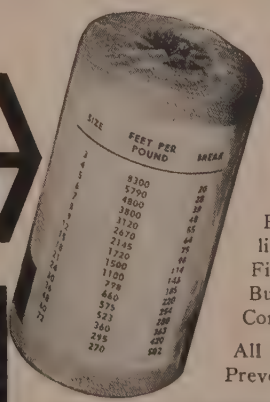

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Halibut Commissioners (We almost wrote "Halibut Heads")—At the 1955 regulations meeting of the International Pacific Halibut Commission. From the left: J. W. Mendenhall, Ketchikan; Seton H. Thompson, Chief, Alaska Branch, U.S. Fish and Wildlife Service; Harold Helland, Prince Rupert; Edward W. Allen, Seattle; Richard Nelson, Vancouver, B.C.; S. V. Ozere, Canadian assistant deputy minister of fisheries, a new member of the commission.

Little Change in Halibut Regulations for 1955

Principal change from last year in the fishing regulations issued by the International Pacific Halibut Commission is in the boundary between Areas 3-A and 3-B, which is moved eastward from the Sanak Islands to the vicinity of the Shumagin Islands—specifically, to a line running S. E. ½ E. from the highest point on Kupreanof Point, approximately Lat. 55°, 34′, 08″ N., Long. 159°, 36′ W.

Aside from this, time for seasonal openings and closures is changed to 6 a.m. from 12:01 a.m., Standard Time in the respective areas, for the convenience of fishermen; and for the same reason the opening dates of second seasons are slightly readjusted to meet tidal conditions.

The fishing seasons in the respective areas are as follows:

Area 1-A—South of Heceta Head, Ore.; one season, 6 a.m. May 12 to 6 a.m. Sept. 3; no limit.

Area 1-B—Heceta Head to Willapa Bay, Wash.; two seasons, each coinciding with Area 2.

Area 2—Willapa Bay to Cape Spencer, Alaska; two seasons: (a) First Season opens 6 a.m. May 12; closing to be announced when limit of 26,500,000 lbs. is taken; (b) Second Season, 6 a.m. July 27 to 6 a.m. Aug. 3; no limit.

Area 3-A—Cape Spencer to Kupreanof Point, near Shumagin Islands; two seasons: (a) First Season opens May 12; closing when limit of 28,000,000 lbs. is taken; (b) Second Season, 6 a.m. July 27 to 6 a.m. Aug. 5; no limit.

Area 3-B—All waters west of Area 3-A, including Bering Sea; three seasons: (a) First and Second Seasons coincide with Area 3-A; no limit; (b) Third Season, Aug. 11 to Sept. 3 (23 days); no limit.

Some of these dates will be changed if the first season in Areas 2 or 3-A is not terminated by July 17. In any area not previously closed, the season will close Dec. 1.

Clifford Mason, owner of the troller *Ingrid*, died March 10 while tying up his boat at Neah Bay. He was a native of Nanaimo, B. C., and had fished out of Wrangell, Alaska, some 14 years before moving to Seattle last fall. He was a member of the Fishing Vessel Owners Association.

Puget Sound Regulations Seek Maximum Escapement At Peak of Runs

Net fishing regulations for the 1955 Puget Sound salmon season were announced April 4 by the State Department of Fisheries, making very few changes except for some increased weekly closures and special closed periods. These are designed specifically to permit maximum escapement during the peak of the Pink and Chum runs — the time when, according to best current scientific opinion, the fish are of greatest value for spawning.

Thus, for protection of Pinks, the Labor Day closure will be 96 hours, starting at 12:01 a.m. Friday, Sept. 2. Chums are given extra protection by a 9-days' closure, from 4 p.m. Nov. 4 to 4 p.m. Nov. 13, in Area 6 south of Pt. Wells; and in all waters inside the "77 line," 96 hours from 12:01 a.m. Nov. 4 for purse seines and 4 p.m. Nov. 3 for gillnets; also 72 hours from 12:01 a.m. Oct. 29 for seines, 4 p.m. Oct. 28 for gillnets.

These closures may, of course, be changed if the run is much larger or smaller than expected. One reason for their adoption is the prospect of a greatly increased concentration of gear in Puget Sound, with many boats coming from Alaska and some from other districts. It is also pointed out that the Chum run has shown a downward tendency over the years, with a recent sharp drop in some localities.

Other special closed periods will be from 12:01 a.m. Aug. 6 to 12:01 a.m. Aug. 15 in Skagit Bay, Port Susan and Port Gardner; from 12:01 a.m. Aug. 22 to 12:01 a.m. Sept. 6 in Bellingham Bay, and from noon to 4:30 p.m. daily in the military restricted zone west of Whidby Island.

The general salmon season for waters outside the "77 line" will be from 12:01 a.m. June 27 through Nov. 30. Inside waters open for gillnets June 16; for seines, Oct. 5 as usual. The weekly closures, except for the long Labor Day week-end mentioned above, are in general the same as last year.

Some additional regulations, however, were under consideration as this issue closed; in particular, some readjustments in the salmon preserves, including extension of the closed area off the Skagit and Snohomish rivers. Any action to be taken along this line was expected by early May; and hearings on regulatory proposals for the coastal areas of Washington were to be held about that time.

SOCONY-VACUUM
With more than 39 years of combined experience as fishermen and marine lubricant suppliers, the Zar Brothers – "Red," Clem and Milan – have made their General Fisherman's Service at Terminal Island, Calif., a welcome spot for boat operators and their crews.
For whether it's a load of Diesel fuel, a hot shower or mail-forwarding service at sea, these fishermen have found the Zars friendly and helpful – always anxious to please.
"Red," Clem and Milan are typical of the kind of men who serve fishing boat operators with proven Mobil products up and down the Pacific Coast. Visit the Mobil marine man the next time you're in port for the tops in product and service. You'll find him under the sign of the Flying Red Horse.
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Powerblock loading the great tuna seine on the world's largest seiner, **Anthony M.**, shown in the large picture. Above, detail of Puretic block working a demonstration seine at Seattle.

Boom-Point Power Offers New Angle For Seine Fishing

• Focal point of purse seiners' attention on the Pacific Coast this spring, and particularly on Puget Sound, was the Mario Puretic "powerblock," a boom-point gizmo which some fishermen think will challenge, and perhaps rout, the drum seine in the development of purse gear.

What is it?

The Puretic "powerblock" is a lightweight block with a power-driven rubber-covered V-section sheave from 28″ to 36″ in greatest diameter in present models.

In purse seining, when the net is to be retrieved and loaded on the stern of the vessel, the block is opened, the net placed on the sheave; then the block is hauled to the boom-point, and its power applied. Turning under power, with the V-shape of the sheave, aided by molded cleats, gripping the net, the powerblock pulls the net up out of the water, over the sheave, and feeds it down to the men on the turntable for piling—just as is done when a net is fleeted by strapping, only far faster, and with no manual labor.

Simple? Sure it's simple.

That's the most amazing thing about it—that no one has ever thought of it before.

Beauty of it, according to the purse seiners' conversation as they watched the powerblock working at the Marine Construction & Design Co. yard, Seattle, in April, is that (1) the powerblock can be adopted with comparatively little expense; (2) no alteration of the boat is required; (3) and none in the net.

In short, buy a powerblock, and you're in the power seining business. If you've ever strapped a net, you have practically nothing to learn.

• How do you know it will work Well, when Puretic finished his fir working model down at San Pedro la winter, Anton and Dominic Misetic of the world's biggest purse seiner— *Anthony M.*—agreed to give it a tri at sea.

It worked perfectly, but of cours the first model showed improvement which should be made. These were in corporated in Model 2, which w a brought up to Seattle in April and pu on exhibition.

Peter Schmidt at once put "Marco engineers to work on the standar design for a production model in ca aluminum. Puretic, by the way, h selected Marine Construction & D sign Co., 2300 Commodore Way, manufacturer of the "powerblock" ar its distributor in the Pacific Nort west, Canada and Alaska. The "Ma co" sales representative in Briti Columbia on the "powerblock" Ocean Marine Supply, Ltd., Va couver, B. C.

Questions?

How much does it weigh? Prese model with 36″ sheave, 200 lbs. Ma co's first production model in s water resistant aluminum alloy, wi 28″ sheave, 150 lbs.

How big a net will it handle? T 36″ sheave hauled the *Anthony M* net without trouble, and that is b lieved to be the biggest seine in t business. For even a 6-strip salmon

ge high seas type a 28" sheave is be-ieved to be ample.

How is it driven? Present model is powered with an endless rope belt off ge power head of the purse winch, nence through four fair-leading neaves on the powerblock and round a groove near the outer edge f the main sheave.

Can other drives be used? Sure; the roduction model will have fittings or attachment of an hydraulic motor nd reduction gear. Other drives can e adapted.

Which is preferred? Too early to ay fully; but fishermen who have udied the matter are inclined to avor the rope drive from the winch adequate; and it is simple, inexpen-ve, and light.

Is the powerblock patented? Mr. uretic is understood to have secured atent protection on the design and nethod of using the elevated power-riven block for hauling nets aboard shing vessels in the United States, anada and other foreign countries. ll possible methods of driving the owerblock have been covered in the atent applications.

Can it be used for fishing other than urse seining? Experienced fishermen hink so. They believe that *both* wings f a lampara can be hauled over the block at the same time, bringing the bag up evenly and equally. Halibut fishermen also have been interested in the powerblock because a turntable is not actually necessary where it is used and a vessel can switch from halibut fishing to purse seining with a minimum of delay and conversion expense.

Mario Puretic, right, inventor of the **"Powerblock";** with **Peter Schmidt** of Marine Construction & Design Co., Seattle, manufacturer and distributor in the Pacific Northwest.

What about gillnetting? Ocean gillnetting, particularly with the very long nets such as the Japanese fish in the North Pacific, and as the Canadians have tried, could use the powerblock to advantage.

What happens to gilled fish? The block can be stopped and they can be picked out as the net goes up; but experience has shown that they are rarely damaged in passing over the sheave and most fishermen snatch them out of the web as it comes down to the table.

Where will it be used? A considerable number of the powerblocks had been ordered at presstime and it was evident that they would be seen in operation this summer on Puget Sound, in British Columbia and Alaska. In all probability they will be used widely in the B. C. herring fleet, where fleeting the net is normal operating procedure.

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For those not requiring the extra protection given by Neoprene treatment we suggest **TOWER'S "FISH BRAND"** oiled or **"ARROW BRAND"** rubber garments. Styles available include jackets, pants, hooded shirts, coats, aprons, sleeves and hats. All good dealers carry these items or can get them for you.

For folder of styles and detailed information write Department **PF.**

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At FCA Helm—Capt. Nick Felando, right, owner-skipper of the seiner **Treasure Island,** is the newly-elected president of the Fishermen's Cooperative Association, San Pedro. On the left is Mason Case, FCA manager.

SAN PEDRO SEINE SETS

NEW SATURNIA was damaged by a fire in the galley and mid-ship section while docked at San Pedro in mid-March, said to have started from boiling tar spilling on the galley deck. . . . Justo Karmelich has succeeded Vincent Marich as president of the San Pedro Yugoslav-American Club. Others seated include J. Zaninovich, Louie Bogdanovich, Marich, J. J. Galasso and Marin Suglian. . . . Miss Alicia Noya, head of Star-Kist's export department, recently returned from a vacation trip to Puerto Rico. . . . Fishermen's Local 33 women's auxiliary has contributed a $100 check to the support of the San Pedro Post Polio Clinic. Thelma Jerkovich is president of the auxiliary.

DAVE ROBINSON, Van Camp plant foreman, Terminal Island, won a $13 cash prize for returning a tagged tuna to the California Fish and Game. . . . Charlie Buchan, purse seine fleet manager for Van Camp Sea Food, and Mrs. Buchan left by plane March 28 for Scotland, their "old country" birthplace. They plan to be vacationing about two months. In the meantime, Pete Buchan, Charlie's son, will take over duties at the fleet office. . . . Nick Resich and Earl Mellow of Star-Kist won an inter-office bowling match recently, played with Tom Bezich and George Gligo. . . . *Stella Maris* and *Western Monarch* were the last seiners to deliver Bluefin to port, as of mid-March.

MARINE HARDWARE CO., Berth 73, reports that purse seiners dipping nets in Techkote recently include the *Discovery, Vagabond, St. Christopher, Adriatic, Southland* and *Zephyr*. . . . Ernie Falsetta, Marine Hardware, has a new hobby — frog spearing. Ask him about it. . . . *Alaska Reefer,* the Vilicich freezership, was reported on her way home from South American in mid-March. . . . The remodeled offices of the Fishermen's Cooperative Assn., San Pedro, were nearing completion at presstime for this issue of PFN.

COURAGEOUS was reported to have a new type of power block for handling of the net in operation. . . . Charlie Buchan of Van Camp and Harold Relstab of Star-Kist represent the fishing boat owners on the Marine Radio Council of Southern California. Mason Case of the Cooperative is also a member of the executive committee. . . . Work is progressing on the east side of Berth 73, the new dock for purse seiners, constructed by the Port of Los Angeles. . . . The *Santa Helena* and her skipper and engineer were featured in the Wix filter ad in the March issue of *Pacific Fisherman.*

STANDARD OIL is opening a marine fueling station at Balboa, Canal Zone, to offer service especially to tuna clippers and purse seiners calling there. Bruce C. Holmes is in charge. Veteran Standard Oil man Ed Hartman was introducing Bruce to the San Diego fleet in early March . . The *Anomar,* formerly of Santa Barbara, has been sold by Sun Harbor Marina to Bill Woodward of San Pedro. The same broker has sold the *Rex* to Bob Larson, the *Patricia,* Monterey, to John Silva of San Diego; and the *May Go III* to George Brokaw.

New Troller "LeAnne" Has Modern Equipment

I. L. Blore, Port Angeles, Wash., the proud owner of the 43′ x 1 *LeAnne,* one of the latest additions t the salmon trolling fleet. The boat wa completed recently at the Hanse Shipyard in Port Angeles.

Power is provided by a Model JF 6-M, 110-hp. Cummins marine diese equipped with 3:1 Capitol hydrauli reverse and reduction gear. The en gine was supplied and installed by th North Coast Engine & Equipment Co Seattle.

LeAnne is equipped with a Mon tailshaft which turns in a Goodric cutless rubber stern bearing and ope ates an Olympic propeller. She has Walter Clean-Flo fresh-water coolin system.

Joining the Port Angeles fleet this season I. L. Blore's 43′ troller **LeAnne,** Cummi Diesel powered and with complete up-to-da equipment, including electronic devices. (Photo by Ray Krantz.)

A full kit of electronic gear is ca ried, including a 360-fathom Ra theon Fathometer, a 50-watt Apel radio telephone, an Apelco directi finder and a Wood Freeman Me Marine Pilot.

LeAnne has two banks of 12-v Fremont marine batteries, supplied the Fremont Electric Co., Seattle. F cooking and comfort, she has a Was ington Stove Works' Olympic ran and a Gypsy oil heater.

Construction Starts on False Creek Moorings

The long-awaited construction of new fishermen's wharf on Fa Creek, Vancouver, B. C., is schedul to begin in May, with completion t tatively set for early next year. T moorage, with 180 berths, will operated by the National Harb Board.

"The key to profitable fishing lies right here . . ."

. . . make sure your next engine is a NORDBERG!

• The actual performance of the best designed, best built fishing boat in the world depends to a large extent on the kind of marine engine that is used for propulsion. The kind of performance you get depends on the engine you install . . . and, depending upon operating and maintenance costs, as well as engine down-time, your choice of power can mean the difference between profit and loss at the end of the fishing season.

Nordberg Gasoline Marine Engines offer exclusive engineering and construction features that provide maximum fuel economy, minimum upkeep, and extra years of top-notch performance in the toughest kind of fishing service.

You don't have to take *our* word for it . . . just ask the skippers who have been shipmates with Nordberg power—they'll tell you that you just can't beat the reliable, low cost operation of Nordberg engines.

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G254-F

Northern Light, resting on the bottom in the mouth of the Noyo River, Fort Bragg, Calif., after she struck a rock in the harbor entrance and sank. Originally she rested in a hazardous position in the breaker, but had been moved into quieter water when this picture was taken by Mae Robbins.

"Northern Light" Wrecked In Noyo River Mouth

Lack of a suitable outer harbor at the entrance to the Noyo River, Fort Bragg, Calif., resulted in the recent wrecking of Ted Aucker's 52′ dragger *Northern Light* as she sought to enter in heavy weather.

The trawler was caught in the jaws of the entry and swept off-course by a westerly swell that threw her upon a submerged rock that was supposed to have been removed from the mouth on the south side of the jetty.

The vessel sank in the fairway and was battered by heavy surf for the better part of a day. Aucker and his crew, Rex and Henry Urbani, remained aboard the vessel and aided salvage efforts.

The Coast Guard, aided by tractors, managed to shift the vessel upstream far enough to escape some of the battering of the sea. The next day divers rigged oil drums to give her sufficient buoyancy so the *Noyo Star,* skippered by Manuel Figueiredo could tow her upstream to the oil dock.

Then for two days volunteers from the Noyo fishing fleet worked to patch the *Northern Light* enough so she could be put on the ways. Joe Perry, owner of the ways, estimates it will take two months or more to get the vessel back to fishing again.

Ironically enough, Mr. Aucker, who suffered this loss, is a member of the harbor commission and has been a leader in the long fight for an outer harbor to give protection for boats entering the narrow slot where the Noyo and the breakers meet. Only recently he took congressmen, engineers and others on a trip on *Northern Light* for inspection of the hazardous condition of one of Northern California's few sheltered fishing ports.

Early Eureka Crab Catch Very Light

Crab operations out of Humboldt Bay were disappointing for the first quarter of the year. By mid-March, deliveries by Eureka-based craft totalled only about 140,000 lbs, compared to 676,000 lbs. for the corresponding period of 1954. Some improvement was noted toward the end of March.

Dealers at Eureka agreed that the situation was definitely worse than at any time in recent years. One said that a bad season occurs about every three years, and this appears to be one of them.

Large quantities, however, were being delivered to Eureka from Oregon points and Crescent City, where crabbing has been generally better than to the southward.

In the meantime, the California Legislature was working on proposed legislation which would set the opening date for crab at Jan. 1, instead of Dec. 15, as in the past.

Eureka Trollers Hopeful

Early April along the northern California coast found fishermen at Eureka, Crescent City, Trinidad and other points making ready for the opening of the 1955 salmon season, which opened May 1, to continue until late September.

Indications were that a number of crabbing vessels would convert to salmon gear, in view of the relatively poor crab catch up to that time. A number of boats were on the ways at the Gillette and Graham boat yards on Humboldt Bay for overhaul and painting.

Salmon fishermen are hopefull that the 1955 season will better that of 1954, which was one of the poorest in late years with a total catch of only 1,127,400 lbs., compared to 2,949,000 in 1953, which was the best season since 1950.

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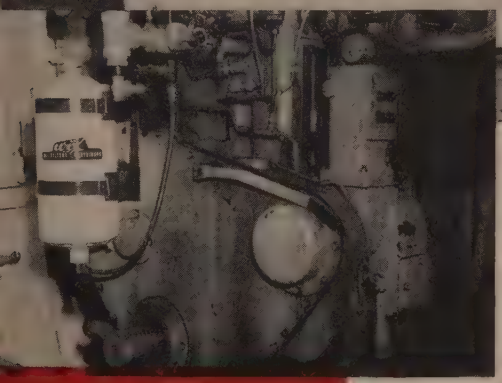

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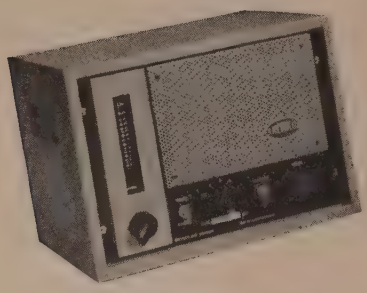

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oss Landing
iscellany

nce late in March painting and ing of boats has been in high gear kippers set their sights forward to 1. Fred Sandness of the *Lincoln*, e Schroeder of the *Mandy*, Errol Norris Scriver of the *Jean Ellen*, ce North of the *Judy II* and Fran- Ferber of the *Patricia* were hard vork every day getting their boats ood condition for the season.

* * *

he 45′ troller *Ruthie* was sold re- tly to Olav and Johan Levang by n Johnston, Jr. of Santa Rosa, if., who often fished out of Moss ding. The Levang brothers, of coma, have fished herring and sal-

est "Ernie" R. Monteiro, managing owner al skipper of the tuna clipper **Shamrock,** as 's camera found him at the American aboat Association during recent meetings the association's members on problems of San Diego tuna industry.

Charles Buchan, right, Van Camp Sea Food Company's purse seine fleet manager, discusses the strength and durability merits of Dupont nylon netting and twine with Mike Puliselich, mastman on the **North Queen,** purse seiner, left, and Vince Budrovich, skipper of the **Delores M.** Several tuna and sardine purse seiners are using sections of Nylock in their nets, including the **Columbia, Renown** and the **North Queen.**

mon in Puget Sound and Alaska. They plan to take the *Ruthie* north as soon as Johan has recovered after an operation. Don Woodward, Jr., who runs the Oakland brokerage branch of Moss Landing Maritime Associates, made the sale.

* * *

Kenneth Marshall, yacht and ship brokers commissioner for the state of California, was a recent Moss Landing visitor. Kenneth is a very remarkable man: he has been totally blind for years, but he "sees" everything through the eyes of his wife, Betty. He talks in detail about every port in the state where he pays periodic visits, and knows hundreds of people by their voices.

* * *

Ralph Marsh, buyer for Starkist in Moss Landing, has returned from a trip to Seattle, his former home town, and other ports in the Northwest. He found fishermen from Moss Landing in Astoria and Westport.

* * *

Phil Hover of the Hover Equipment Co., Monterey and Moss Landing, will be a member of the crew on Elmer Hitchcock's schooner, *Sea Mist*, in the July 4th Honolulu race.

* * *

George Van Syckel on his *Inez D.* has joined the *Croaker* and *Spindrift* fishing for basking shark. Sharking has been good and the men are happy at the opportunity to fill in this slack time before the opening of the salmon season.

* * *

Frank Hart of the *Mable M.* is overhauling the engine on Nick Butriza's *Ki-Pa.*

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Standard Engineer's Report

CASE HISTORY

PRODUCT RPM Delo Oils and Standard Diesel F

FIRM M.V. Nancy Hanks, San Pedro, Calif

Special oil ends ring trouble and oil burning

BEFORE USING RPM DELO SPECIAL LUBRICATING OIL, Jim and Matt Martin had trouble with loss of compression, hard starting and excessive oil consumption in the M. V. Nancy Hanks' 180 h.p. Atlas diesel. Overhaul in 1950 showed competitive oil caused hard carbon deposits in ring grooves and on other parts. Run exclusively on RPM DELO Special Lubricating Oil since overhaul, they have had no further trouble. "RPM DELO" keeps rings clean and reduces wear; oil consumption still is normal and compression remains up to factory standards. Engine is in top condition in spite of year-round hard work.

"WE RAN TWO YEARS WITHOUT PULLING AN INJECTOR, t after changing to Standard Diesel Fuel," says Martin (above, left). "We've had no trouble at with fuel pumps and injectors, even though we did use fuel filters. Standard Diesel Fuel always gi us full power at all engine speeds."

REMARKS: Standard Diesel Fuel and RPM DELO Oil work together to develop highest efficiency in diesel engines. The fuel is made to exact specifications; the oil contains compounds to keep engines clean and prevent wear.

FOR EXPERT HELP on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write to 225 Bush St., San Francisco, Calif.

STANDARD DIESEL FUELS

RPM DELO LUBRICATING OILS

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How RPM DELO Oils keep engines clean and prevent wear

A. Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.

C. Special compounds stop corrosion of any bearing metal and foaming in crankcase.

STANDARD OIL COMPANY OF CALIFORNIA

eorge Severns at the wheel of his 40-ft. oller "Rauma." When the salmon quit biting e ties her up and starts his sawmill; both oat and mill are powered with GM diesels.

New Trawlers' Union Gets Seafarers' Charter

The Pacific Coast Fishermen's Union, new organization of otter trawling crews, recently received a charter n the Seafarers International Union A.F.L.) Art Abelsen is secretary-reasurer of the new union. The Otter Trawlers Union, which formerly embraced the crewmen, was decertified by the N.L.R.D. some time ago because it included boat owners and skippers along with the crews.

Sawmill or Troller, The Power Is G-M

George Severns of Ajlune, Wash., is both a sawmill operator and a commercial fisherman, and when he shuts down his sawmill in the spring to go fishing he now turns off one General Motors diesel and starts up another.

George has used GM diesel power in his mill for some time, and recently repowered his 40′ salmon troller, *Rauma*, with a GM 4-51 small-boat diesel.

Turning a 32″ x 20″ wheel through 3.5 to 1 reduction, it gives the craft a top speed of over 8 knots. She has a payload capacity of six tons and is operated chiefly in waters off Ketchikan, Alaska.

Mr. Severns regards the GM diesel as ideal power for both his activities. "They're always ready with the extra surge of power I need, either to go through an extra-heavy log or to keep from drifting toward Japan on an extra-stormy night," he says.

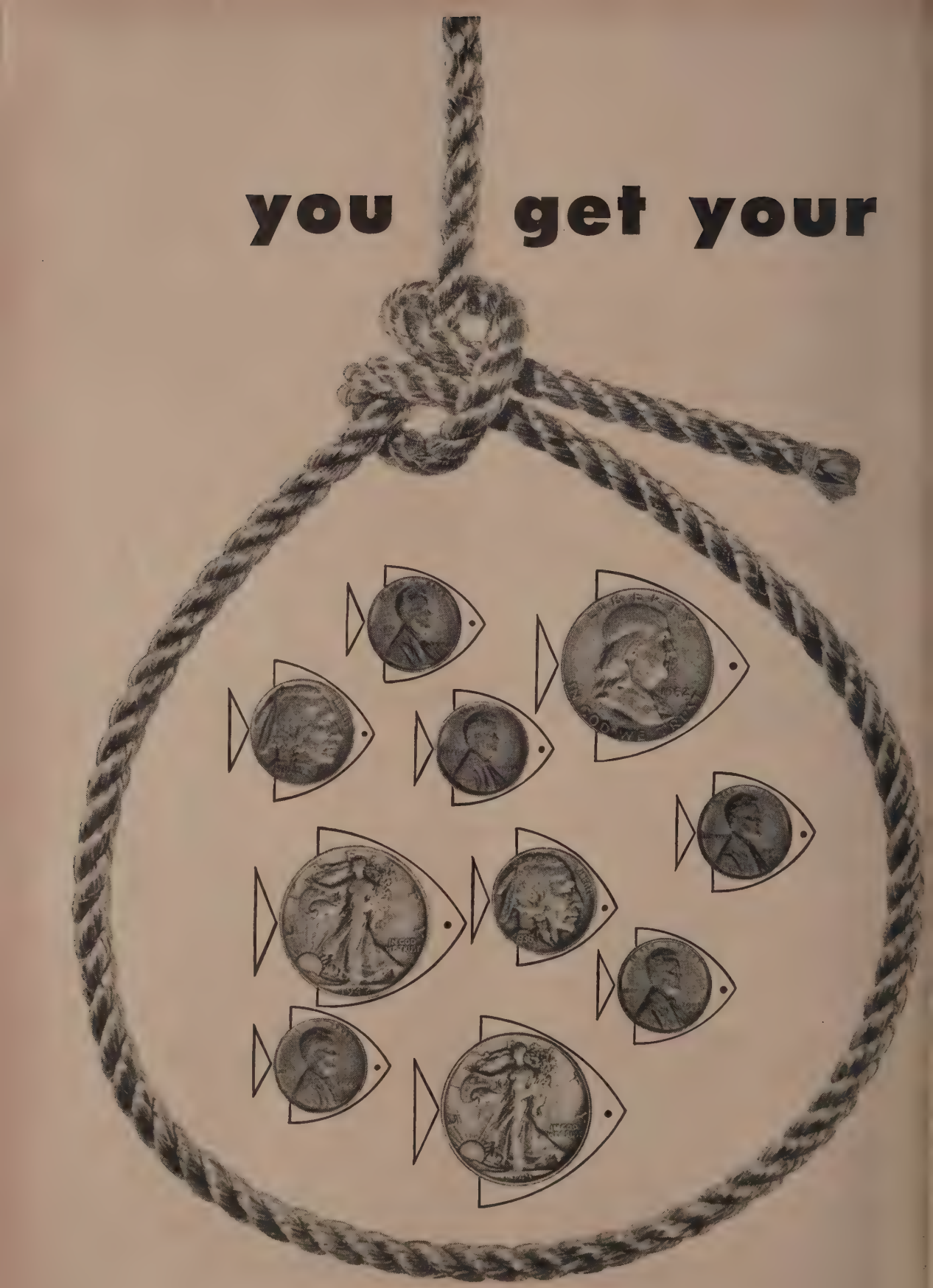
Fish & Crab Landings At Westport in 1954

Commercial fish and crab landings at Westport represented a cash value to fishermen of $1,020,001 last year, Port of Grays Harbor authorities report.

Salmon Troller Rauma, recently repowered with a GM "4-51" small-boat diesel, installed by Evans Engine & Equipment Co., Seattle.

Landings totaled 1,292 tons of fish, worth $675,386, and 117,216 dozen crabs sold for $344,615.

Salmon landings totaled 1,079.95 tons; Albacore, 51.1 tons. Total value of fish was nearly $200,000 below the 1953 total when 1,836.10 tons of fish were landed. Crab landings in 1953, however, totaled only 88.700 dozen.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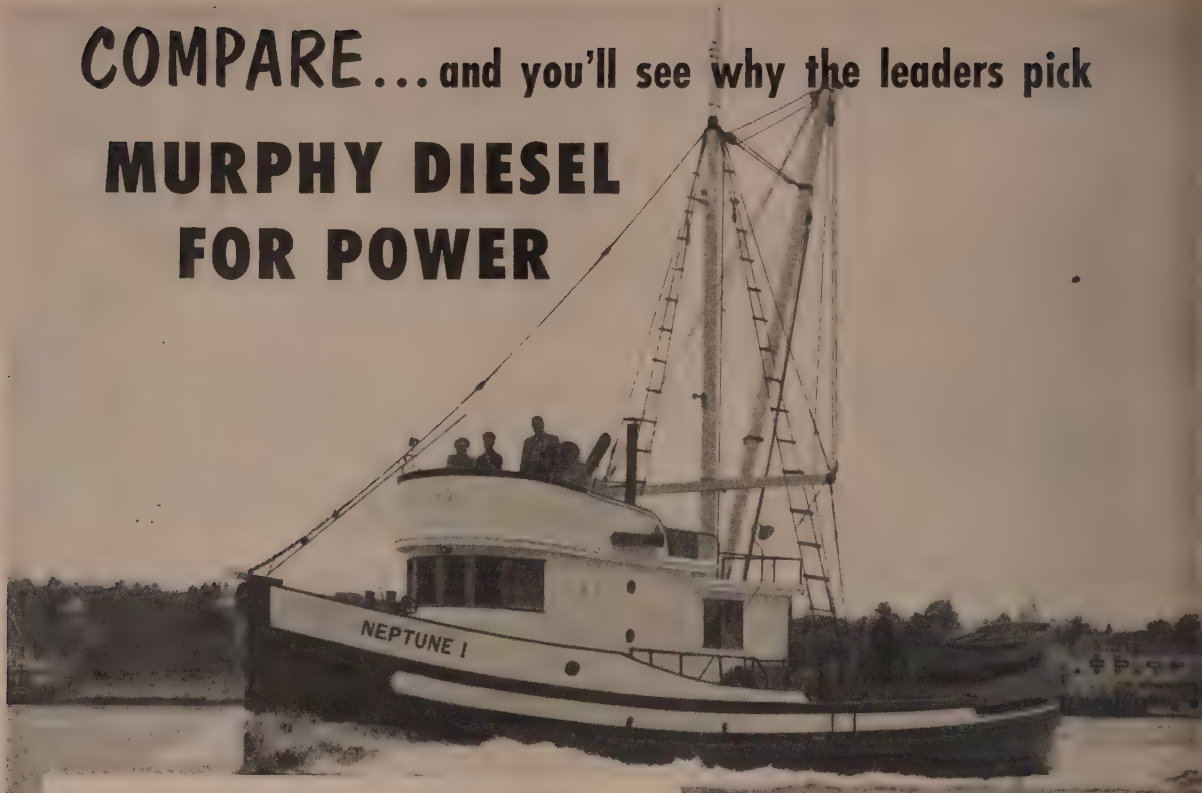

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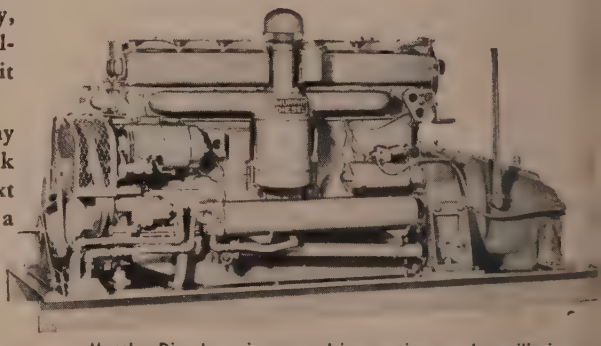
And you can't beat Murphy for economy, either. Murphy Diesels will save you many dollars on fuel cost with the famous Murphy Unit Injector plus "true" diesel efficiency.

You'll be interested in details on how Murphy power can increase your season profits. Ask your dealer for "10 REASONS why your next engine should be a MURPHY", or write for a copy direct.

The "Neptune I" owned by Joe Boscowitz, Vancouver, B.C., was recently rebuilt and repowered with a 190 H.P. Murphy Diesel. Kruno Boscowitz is skipper. Watch the trend to Murphy.



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200-Mile Limit— What Brings It? And What Will it Bring?

By JAMES T. HILL

For a number of years now the United States has been pouring billions of dollars into South America in furtherance of a "Good Neighbor Policy." Any resultant increase of trade has been to a mutual benefit, and South America has never reciprocated with a sacrifice of her own towards our country.

The recent gesture towards our country, instead of being in a spirit of good neighborliness, has been one very unfriendly. I am speaking of the recent placing by three South American nations of a 200-mile limit to their maritime jurisdiction. The justifying argument is that this limit is a conservation measure; as Dr. Chapman stated this is just a smoke screen. The United States has been conducting all the tuna research and conservation so far. In fact, the limited tuna market is in itself a conservation element that cannot be improved upon.

Without this justification for an unfriendly act, South America's restriction of the freedom of the seas is contrary to International Law; an outlaw act in which confiscation of a fishing vessel exercising the right of this freedom of the seas is an act of piracy.

One wonders as to the true motive if it is not conservation. I am enclosing a clipping which portrays how the Communist element is becoming more powerful in one South American country, whose main purpose, we know, is to belittle our country in every way they can. This could be a reason, but one must be cautious about labeling everything which displeases us as "Communism." We of the fishing industry know how more and more American boats are operating out of South America; and this 200-mile limit may be a measure to give them a monopoly on the fishing banks.

Whatever the reason, if this limit is allowed to stick you can be certain that Central America and Mexico will enact similar measures. Then if an American clipper wants to catch tuna it will have to pay large additional fees for licenses. For a large clipper forced to work the total length of the fishing banks these fees would be prohibitive. The main concern of the American tuna fishermen is to meet foreign competition, possibly with a further reduction in price. With the added expense of these fees that would be impossible to do.

If our government shows no more concern for the tuna fishing industry than it has in the past, preferring instead to maintain so-called "International Friendly Relations" regardless of the detriment to us, so we can have the privilege of throwing additional billions away, the fishing vessels' only recourse is to move out of the country and base in some foreign local. Then they would be fighting fire with fire: to combat importation they would be importers themselves.

The fishing business is fluid, forever going through a change to meet current changing conditions. Perhaps the present mode of catching tuna is outmodeled, and for boats to become foreign-based won't alone be the answer. Perhaps the whole method of catching tuna will have to be revised, as for instance from live bait and purse seine fishing to longlining.

Sverre Jangaard has proved with the *North American* that the method is feasible on his experimental trips of last year. If a number of boats, and men of his admirable caliber, were to engage in that experiment I am sure that each would come up with some idea on how to improve the gear and fishing method; and the pooling of these ideas would make financial success in longlining a certainty.

You are acquainted with my own ideas about longlining, and it drew an argument that uncertain winds and currents would make my ideas not workable. But I have read all of the literature on Fish and Wildlife Service and Scripps exploratory cruises and their information backs me up. Of course, as I said, my views at that time were for the purpose of starting the arguments to rolling; I realized that the methods I advocated could be improved upon. One point that I failed to bring out was that the boat would have a full shelter deck extending flush to the stern; and the gear would be stowed on the shelter deck, and the work of setting gear performed from there. The main deck would be used exclusively for hauling gear, with pens for receiving fish as they were caught. Much the same as is done on halibut schooners, on which I have had extensive experience.

The smaller tuna clippers — up to 150 tons — could be very easily converted to longlining by removing one

Mr. Hill is a practical tuna fisherman, formerly a halibut fisherman, who makes his residence at San Diego, Calif., Post Office Box 1309.

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Now, EDO, famed builder of high performance sonar for the United States Navy and other fine marine electronic equipment for commercial craft, announces the Edo Model 320 Radar.

This fine, thoroughly-tested piece of electronic equipment has been created especially for use in small craft where space and generator capacity are limited. Operating on a wave length of 3.2 centimeters (X-band), it provides clear, precise definition of shore line, buoys, boats or other hazards on five scales—1, 2, 5, 10 or 20 miles—and showing objects as close as 25 yards—making it useful for operation in both open and restricted waters.

The exceptional performance of the Edo Model 320 Radar stems from the use of the compact, patented, slotted waveguide antenna which reduces side lobe reflections. This exclusive antenna cuts down windage and is impervious to weather. The Edo Radar has been designed for ease of operation, long life and simple maintenance. Despite its superior performance it is in the lowest-priced bracket bringing the time and money-saving advantages of radar to many owners of smaller boats who could not previously afford this latest aid to navigation.

You can install Edo Radar in your craft with utmost confidence, for it bears the famed Edo Flying Fish emblem, known and respected as the mark of superior, dependable performance on depth sounders, survey depth recorders, the famed Edo Fishscope, the Edo Loran and other marine electronic equipments. Write for further information.

Exceptional performance of Edo Model 320 Radar centers around this exclusive, patented, slotted waveguide antenna which reduces side lobe reflections. Transmitting unit is mounted directly under antenna to reduce power loss customarily encountered with long waveguide runs from mast to wheel house.

PPI Display Unit can be conveniently mounted on bulkhead, desk or overhead and is designed for greatest possible ease of operation. It can be fitted with hood for viewing under bright-light conditions.

Edo

Edo CORPORATION College Point, L.I., N.Y. SINCE 1925

ait box to give her more stability in ıe rough weather encountered in the ıid-Pacific; and by building up the ern bulwarks to keep out boarding :as; and by extending the shelter deck ırther aft; and by cutting the haul- ıg area of the starboard bulwarks midships down so that fish could e brought aboard easily. This latter ould not affect the seaworthiness in ough weather, because while hauling ear the low side would be to leeward.

3. C. Fishermen Get Compensation Coverage

Under recent legislation, British Columbia's 15,000 fishermen are given coverage of the Workmen's Compensation Act, as they have long urged—that is, if they are willing to pay about 3% of their average earnings into the compensation fund.

The "industry" will not contribute, says Labor Minister Lyle Wicks, although the law provides for an assessment based on quantity of fish received. In other industries such benefits are provided by assessments on the employers, but the position is taken that the transient and independent nature of fishermen's operations makes it impractical to assess contributions from the companies to cover fishermen not regularly employed by them.

Martindale, Capt. Birger Petersen's 80' halibut longliner, purse seiner and salmon packer, was repowered this spring with a turbocharged Atlas diesel developing 300 hp. at 1,200 rpm., cut 3.92 to 1 at the wheel by a Twin Disc reverse and reduction gear. The installation includes a feature believed unique in Pacific Northwest fishing vessels, a 35-hp. Twin Disc power take-off clutch, hydraulically operated, and mounted on the main reduction gear case. The take-off is at 800 rpm., geared down 2 to 1. It is used to drive deck gear and pumps. **Martindale** also carries a 16-hp. Lister diesel auxiliary. Photo shows the Atlas being installed by the Port of Seattle facilities at Fishermen's Dock, Seattle.

Tony Ascanio suffered a heart attack on his boat *Sunshine* about three miles out of Monterey. Mino Incaviglia, fishing in his *Tommy Boy* nearby took Sunshine in tow, bringing her and her skipper to port, where he died later in a hospital.

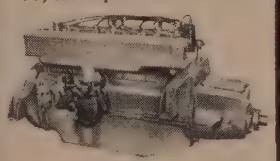
Mr. Ascanio, 64, had been a resident of Monterey for the past 30 years. He was a native of Isle de Femine, Italy, and had been a fisherman all his life.

* * *

The engines of San Francisco trawlers *Seaworthy* and *Western California No.* 1 were overhauled at Oswald Machine Works, Fishermen's Wharf, last month. Both engines are 150-hp. Murphys.

SUPER-SIX—130 h.p. Stevedore —340 cu. in. at 2800 r.p.m.

EXPLORER SIX—95 h.p.—230 cu. in., 3200 r.p.m.



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There's solid dependability built into every Universal Marine Engine. Over 56 years' experience in this 100% Marine Engine business guarantees it.

With a Universal, you'll spend far less time on maintenance . . . and on fuel. That's money in your pocket. These double savings multiply year after year.

And now with Universal prices lower than even non-marine engines, you have every reason to have the best. See for yourself the money you can save. See your Universal dealer or mail handy coupon.

Models from 8 to 145 h.p., 1 to 6 cylinders. Choice of reduction gear ratios and front-end equipment. Marine battery chargers and electric plants from 250 watts up to 75 kw., gasoline and diesel.

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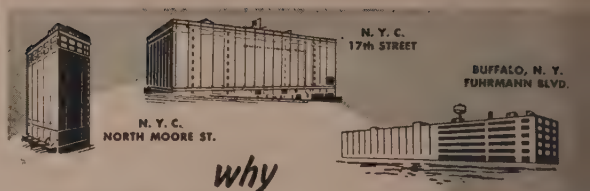

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C. Fishing Vessel wners Elect Officers

A. (Tony) Boroevich, owner of the *lonel Holmes,* is the new president the Fishing Vessel Owners Associan of British Columbia, elected at thirteenth annual meeting in Vanuver recently. Vice-president is arles Clarke, owner of the *Veta C.* Directors of the association, accordg to divisions represented, are. Halit, Edgar Arnet, *Kodiak;* salmon, orge T. Brajcich, *Freeland;* herring, rold Henriksen, *Ocean Pride;* trawl, rman Sigmund, *Sea Pride II;* pack-, Helge Skarpnes, *B. C. Rover;* mbership, Kurt Larson, *Western rl;* publicity, Joe Gregory, *Tatchu;* vernment, Norman Fiddler, *Dolia II.*

illnetters Enjoy leasant Party

Gillnet fishermen of the Puget und district and their ladies held an joyable party and dance in the bor Temple at Everett April 2, on e occasion of the joint meeting of e Puget Sound Gillnetters Associaon and its Women's Auxiliary. Genal chairman in charge of the party as Mrs. Elizabeth Strand, assisted by Irs. Vera Groton, both of Everett.

Hefty Halibut — Here's a 212-lb. female halibut—big for these days—taken on the Trinity Island grounds by the schooner **Pioneer,** Capt. Olaf Hendricks, at the left. With Hendricks and the halibut, Olaf Melseh and Ole Field of the **Pioneer.** (International Halibut Commission photo by Morris Southward.)

Bergman Returns from Plymouth Sales Meeting

A. L. Bergman, Pacific Coast manager, Plymouth Cordage Co., is back at his San Francisco headquarters after a Chicago sales meeting. Presiding was B. B. Bradley, vice-president in charge of sales, and among those present were L. F. Southwick, assistant sales manager, and William Scherff, advertising manager.

Martin J. Storvik, retired Seattle fisherman, member of the Deep Sea Fishermen's Union, died March 11 after a long illness. He was a native of Norway, aged 71.

* * *

Salvatore Mayjoffo, 68, retired Pittsburg, Calif., fisherman, died last month in a Martinez hospital.

• • *announcing*

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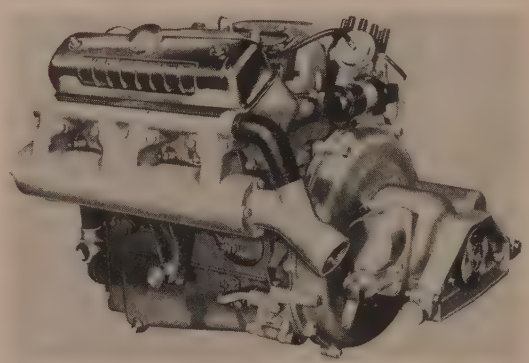

The sleek Interceptor "175," one of four outstanding V-8 marine engines with the new Dearborn hydraulic clutch control and reverse gear unit. Total dimensions are length 39½, width 26¾ and height over crankshaft, centerline, 14¾ in.

DEARBORN MARINE INTERCEPTORS

125 hp — • Washington • British Columbia

145 hp — • Oregon • Western Montana

160 hp

175 hp — • Idaho • Alaska

SENSATIONAL INTERCEPTOR SPECIFICATIONS — Carburetion: entirely new, super-safe intake system, automatic choke; moisture-proof 12-volt ignition system; Flywheel completely enclosed and watertight; Compact: entirely new small size for power produced and can fit where most in-line engines existed; Mountings: Exclusive design, easy micro adjustment in all directions; Weight, new light weight as low as 635 pounds, complete with all equipment, ready to run; and the wonderful Dearbo-Matic Gear Shift: self-contained, hydraulically-controlled reverse gear — full ahead to full reverse in 4/5 second. A Super Torque Engine.

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When a vessel is on the ways for a painting of the bottom, it is the ideal time to save fuel in the future. Fouling growth, the number one fuel waster, need no longer be tolerated. International Bottom Paints offer long-lasting protection against grass, shells, worms and slime. These effective paints contain toxics of extreme purity. The bottom poisons and pigments in them are so finely ground that they can be stirred easily and distributed evenly to give uniform protection of the entire bottom.

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U. S. RUFF-N-TUFF EUREKA SUIT
• inside fly front • corduroy-tipped collar • rust-resistant ball and socket fasteners • underarm ventilation • overalls: elastic suspenders • cut-off band permits shortening, won't curl or ravel • black.

BLACK EUREKA BOOT
• duck-lined, shockproof, thigh-high . . . for maximum comfort.

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• Neoprene outside, inside • resists acids, oils • full-length jacket • corduroy-tipped collar • cemented seams • rust-resistant ball and socket fasteners • bib-front overalls • adjustable suspenders • cut-off band permits shortening without curling or raveling • black, olive drab or safety yellow.

U. S. SQUAM HAT
• reinforced water-shed brim.

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Nylon lampara bag is shown by Frank "Sparky" Coscetti, right, to John Mezin, veteran fisherman and boat owner, as they talk gear at San Pedro.

Officers Re-elected By B. C. Union

All top executives of United Fishermen and Allied Workers' Union were re-elected at the annual convention held recently at Vancouver, B. C. President for a second term will be H. Steve Stavenes; first vice-president, Pete Jenewein, Maple Ridge; second vice-president, Mrs. Mickey Beagle, New Westminster.

Most notable action of the convention was a resolution to seek affiliation with the new labor congress being formed by the merging of the TLC and CCL.

Lampara Uses Nylon

Frank Coscetti, who operates the lampara boat *Gigi* out of San Pedro, is pioneering the use of nylon in the bunt or bag of his net, 11 fathoms deep. The wings will be of cotton.

The *Gigi* is powered with a General Motors 6-71 diesel engine and uses the new twin-gurdies for hauling the lampara net aboard.

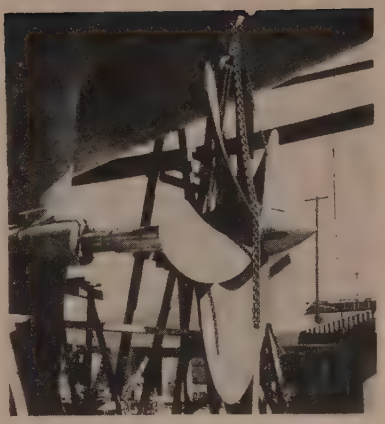
The nylon netting was supplied through Fishermen's Cooperative Association.

Tuna Fishermen Propose Two Research Projects

Organizations representing tuna fishermen in San Diego and San Pedro have proposed to the Department of the Interior that two projects be developed under their jurisdiction, utilizing the funds available under the Saltonstall-Kennedy Act.

The Industry Advisory Committee will, of course, consider the projects which include (1) development of a substitute for live tuna bait; and (2) fisheries oceanography of the tropical and sub-tropical Eastern Pacific.

The first proposal is sponsored by the American Tunaboat Association, International Association of Machinists and the Cannery Workers' and Fishermen's Union, all of San Diego. The latter by the above group and also including the Fishermen's Cooperative Association and the Seine and Line Fishermen's Union, of San Pedro.



Five-bladed Columbian propeller working on the Monel shaft of the tuna clipper **Cabrillo,** and on the sister-ship **Dominator,** built by National Steel & Shipbuilding Co. for Joe and George Soares.

G & M Equipment Company Has New Catalog

A new comprehensive illustrated catalog describing its line of Model 1006 100-watt output Radio Telephone-Receivers has just been published by G & M Equipment Co., Inc., 7315 Varna Avenue, North Hollywood. Designed for ship-to-shore, fixed or mobile station use, the radio transmitter-receiver has been sold extensively throughout the United States, South and Central America.

"THE HOUSE OF FRIENDLY SERVICE"

NORDBY SUPPLY COMPANY

PURSE SEINERS!

You'll find Nordby's Treatment Tank Facilities at the Fishermen's Dock unsurpassed for protecting your nets and ropes with preservatives of tar, copper and plastics.

WALL'S the BEST!

EST 1840 WALL ROPE

Rely on PAULS COTTON NETTING

Clean Up with Pettit Marine Paints

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NET-LIFE net and line preservative

The Original and Genuine In Use Since 1944

1. Easy to apply, no heating; dipping time—5 to 10 minutes. Quick to dry—6 to 12 hours.
2. Highest fungicide, bactericide, & germicide value.
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6. Manufactured under controlled, scientific conditions by the pioneer of this modern type of preservative.

ALL OF WHICH ADD UP TO GREATER ECONOMY THRU' SAVINGS IN NETTING, TIME, AND MANPOWER.

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WONDERFUL COMBINATION

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"It is the last few feet that count"

1800 soundings per minute . . . equivalent to one sounding every 3 inches at 5 knot boat speed . . . accurate readings in less than 2 feet of water, and on up to more than 80 feet . . . bright flashing light . . . indicator only 4 inches in diameter . . . can be mounted anywhere . . . helps you spot the fishing holes—and the fish. A quality product. May be installed with boat still in the water.

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$35. IDEAL FOR SMALL BOATS
OVER 19,000 IN USE

Built-in corrector system **Versatile mounting bracket**
Special red lighting **Half point card also available**

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90 YEARS OF MAKING FINE TACKLE

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Let us figure with you for a fast 100% engineered economical job.

Complete engineering department and machine shop. 10 & 35 Ton cranes, railway spur trackage.

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SEINE SKIFFS WITH SIC 'EM—Two 17 by 7½′ jobs for Nakat Packing Corporation by Commercial Marine Construction, Seattle. They're powered with Chrysler "Ace" engines, sold by National Supply Engine Corp., Seattle, developing 16 mph. Equipment includes Goodrich rubber bearings, Jabsco pumps, Olympic propellers and Kolstrand power rolls.

Three Fishermen Lost In Collision on Sound

Skipper Obren Kokich, Tacoma, and two crewmen—Sig Hovland, Seattle, and Leigh Larson, Tacoma—lost their lives March 10 when the seiner-trawler *Santa Maria* was run down and sunk off Point Wells in Puget Sound by the Navy *LST* 306. John Anton dePolo, Jr., Tacoma, partner with Capt. Kokich in ownership of the boat, was saved, but suffered serious injuries, including a fractured vertebra.

The *Santa Maria* was bound for Seattle from Neah Bay with about ten tons of fish. The collision occurred in a gale, with heavy seas, and the boat sank very quickly. The men lost were apparently trapped in the pilot house, which was torn off and floated. dePolo had been able to get overboard, and tried to release them, but was unable to do so. The collision was the subject of a naval court of inquiry, and a suit for $200,000 was filed on behalf of dePolo and the bereaved families.

Anchovy Fishing Looks Up; Fish Sent North

Anchovy fishing was beginning at presstime to show some signs of improvement off Port Hueneme, according to reports from the lampara boat *St. Peter*, owned by the Porter Bros. of Port Hueneme. There was no packing in the port, however, the fish being trucked north.

During March Boats delivered 2,940 tons, which produced 70,820 cases.

Mackerel tonnage was even less than that of anchovy: 1,369 contributing to 24,715 cases.

The price of mackerel, Jack, was $42.50 to the fisherman; $45 for Pacific, and $25 for anchovies.

Schools of small sardines were being reported off Port Hueneme in early April.

New Gillnetters, Etc. From Maritime Yards

Four 34′ x 9′ 8″ salmon gillnetters were built this spring by Maritime Shipyards, Seattle, for four different owners.

Harry Parker, Mt. Vernon, Wash., powered his boat with a 36-hp. Lister diesel. Sig Hemmingson, Kitsap, Wash., chose a 130-hp. Nordberg Tarpon for his gillnetter. Chrysler Crowns went into the craft owned by Nels Howe, Seattle, and William Leese, Everett.

All four boats were built from the design of William Garden. Equipment on each boat included Monel tailshafts, Goodrich cutless rubber bearings, Olympic propellers and Brolite hull and bottom paints.

The Maritime yard also built a 66′ knockdown piledriver gin and two 30′ x 9′ pot-scows for service at P. E. Harris Co., Inc.'s cannery at False Pass, Alaska.

FOR WHITER, EASIER-TO-CLEAN TOPSIDES USE WORLD-FAMOUS

"CAWLUX" WHITE

In Gloss, Semi-Gloss and Semi-Flat Finishes
Smoother, longer-lasting, resists discoloration by gases and fumes

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SALMON TROLLERS

- Complete Salmon Trolling Gear
- New Duranickel Hooks—Guaranteed Rustless

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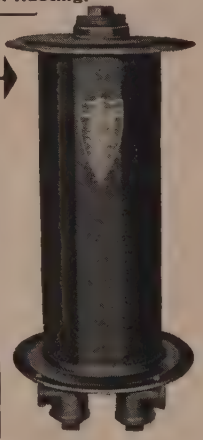
THROW YOUR HEAT EXCHANGER TROUBLES OVERBOARD!

It Costs Too Much To Be Behind The Times

The fishermen who make the most money keep their boats up-to-date with modern inventions. That's why boat owners from coast to coast have turned to **AQUA-CLEAR Feeders** for the most efficient, low-cost engine cooling. You'll cut repair bills, reduce maintenance and greatly increase your profits.

Makes Old Engines Last Years Longer —Keeps New Ones From Ever Rusting.

AQUA-CLEAR Feeders



COOL DIRECT WITH RAW SEA WATER Without Rust, Corrosion or Salting Down

● For over 50 years there was no way to avoid the heavy expense of closed cooling systems. The AQUA-CLEAR Feeder revolutionized marine engine cooling by eliminating inefficient, roundabout ways of keeping salt water out. Aqua-Clear makes all water in the cooling system non-corrosive—you can cool direct without heat exchangers, expansion tanks, complicated piping.

More than 30,000 enthusiastic users say Sudbury's AQUA-CLEAR Feeder completely protects marine engines from rust, corrosion and salting down. It also protects water lines, refrigeration equipment, etc. Non-toxic.

Made for all size engines. Only $49.95 for gasoline engines up to 150 hp. Only $128.75 for Diesel with 1½ in. pipeline. Other sizes in proportion.

AUTOMATIC BILGE CLEANER

Saves Money, Time and Labor

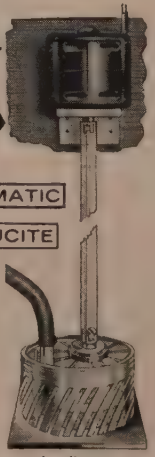
● Reaches where nothing else can—into every corner, even underneath engines and floorboards, gets all grease, slime. Cuts labor costs—no more scrubbing and scraping. **Ends Fire Hazard**—mixes all floating gas or oil with the water and keeps it emulsified so it's pumped out when you pump the bilge. Protects caulking, harmless to paint, fittings, even your hands.

The only Bilge Cleaner with the new miracle deodorizer, MIRASOL (shrimp boats use it instead of pine oil).

Keeps Fish Holds Sanitary—Protects the quality of your catch—avoids spoilage. Cleans everything above and below deck. Quickly and easily removes all gurry and gull droppings. Non-caustic—perfect for washing fabrics, dishes, pots, pans —everything aboard ship. **Low priced, Pint $1.29; Qt. $1.98; Gal. $7.50.**

LET THE ROLL OF THE BOAT CLEAN THE BILGE!

TYPHOON BILGE PUMP



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● The only ALL-LUCITE bilge pump, no metal of any kind. Heavy duty slotted lucite housing needs no screen, greatly increasing capacity—practically impossible to clog! Runs for months without servicing. Unique design takes motor right out of the bilge—no spark can ignite dangerous fumes below.

No close alignment necessary. Lifetime oilless, friction-proof shaft runs on glass bearing. Big capacity—pumps 600 gallons per hour (4-in. size 300 gal.). Even running dry will not injure pump.

So accessible, so simple you can quickly and easily remove motor, drive shaft, even pump impeller—in only 30 seconds without tools! For trouble-free performance, order one today!

Made for 6, 12, 32 or 110 volt systems. Standard drive shaft 18-in. long; can be supplied up to 6 ft. without extra charge. **Fully Guaranteed.** For manual operation, 4-in. **$39.95;** 6-in. **$49.95.** With Automatic Switch, add $10.

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John Bergh, 221 Pomona Ave.
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If your dealer does not display Sudbury Products, order direct.

SUDBURY LABORATORY, Box 991, South Sudbury, Mass.

Maritime Day Parade Planned at Seattle

Fishing boats are expected to p ticipate, along with ferries, tu yachts, etc., in a spectacular wa parade in Seattle's observance of N tional Maritime Day, May 20-22. T parade, including all types of cr will traverse the fringes of Elliott B the afternoon of May 21. All ent have been asked to "dress ship," a prizes will be awarded to the most c standing. The parade will be follow by a series of races for boats of v ious classes.

This is the first time that fish boats and cannery tenders have b invited to participate in the races, their inclusion is expected to add c siderable interest to the event. O boats 40′ or more in length w take part; they will race in a class their own, and the first prize is *n* case of salmon.

Tagging Petrale Presents Problem

Special techniques and gear w used by the FAWS vessel *John Cobb*, on a petrale sole-tagging ex dition to the Esteban Deep star late in March, in an effort to red the high mortality of previous tagg in those waters. The mortality was tributed to extreme pressure char on sole coming up from depths great as 200 fathoms.

The work was done in coopera with the state of Washington and Canadian Research Board, with te nical operations handled by D. L. verson for Washington; B. M. C win for Canada and M. R. Greenw and H. C. Johnson for FAWS.

Two Trollers Wrecked At Grays Harbor

Two Port Angeles trollers, the *Cloud* and *Cemae*, valued at $18, and $10,000, respectively, struck south jetty at the entrance to G Harbor and sank on the night March 17, two days after the open of the season. Walter Rayment, ow of the *Sun Cloud*, was taken off b Coast Guard boat, and the *Cem* crew, Cecil Ferguson, owner, Gordon Windel, got ashore in t skiff.

* * *

Big Jim, combination boat ow and operated by S. Balestrieri, Francisco, has been repowered w a rebuilt 60-hp. Buda engine, chased from and installed by Sh line Diesel Maintenance, Fisherm Wharf, San Francisco.

Moore, sales manager for Tam Engineering Corp., displays the Dearborn Marine engine throughout the Northwest in this station wagon. Tam ngineering Corp., Tacoma, Dearborn Marine distributors: Left to right, Ed Moore, sales manager; Leon Titus, president, and J. N. Cutler, manager.

am Engineering Distributing lew Dearborn "Interceptor"

Tam Engineering Corp., 3033 So. Lawrnce St., Tacoma, has been appointed disributor for the new Interceptor line of earborn marine engines for the territory f Washington, Oregon, Idaho, British Colmbia, western Montana and Alaska.

Leon Titus, a prominent Tacoma boat wner, is president of Tam Engineering orp. J. N. Cutler is manager. Ed Moore, ong-time sales engineer in the Northwest or marine engines, will be sales manager or the distributorship. Dealers are being et up in the Western States.

Tam Engineering Corp. operates a large lant in Tacoma for the authorized reconitioning of Ford, Lincoln and Mercury ngines plus a section devoted to other nakes, including marine. This "exchange" notor arrangement will be applicable to he business of the sale and service of new Dearborn Marine Interceptors, so that boat wners, particularly commercial operators, an have full engine service through the ears with a minimum of shutdown time.

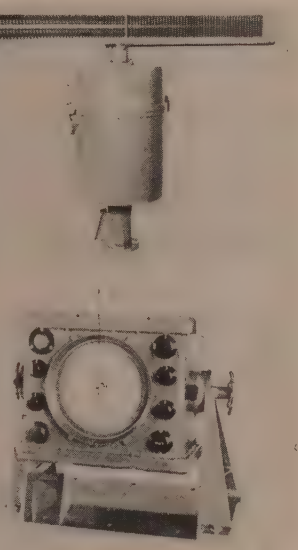
The new Interceptors are a lightweight, ompact V-8 unit of 125-hp, 145-hp, 160-hp nd 175-hp and featuring the Dearbo-matic, ydraulically-controlled reverse gear. An ntirely new-type adjustable mounting rovides easy adjustment in all directions.

Revised Hansen Handbook Contains Essential Information

A revised and enlarged edition of Capt. R. F. Farwell's **Hansen Handbook**—earlier editions of which have been used by Puget Sound and Alaska navigators for over 20 years—contains a wealth of information indispensable in the navigation of all waters between Olympia, Nome and Attu.

The book was completely rewritten in 1951 to include more detailed description of channels, dangers, landmarks, currents, etc., and tells how to reach about 100 anchorages. It gives courses true, magnetic, and magnetic in points, both going and returning; contains 40 additional tracks not previously published, and brings up to date characteristics of lights, fog signals and radio beacons on all routes, including inland waters of Puget Sound, British Columbia and most of Alaska.

If your dealer does not carry the Hansen Handbook, write to Lowman & Hanford Co., P. O. Box 1888, Seattle 11, Wash.



NEW EDO RADAR—In the low cost bracket, this new Edo Radar brings precision radar within the reach of smaller boat operators. It gives information on 5 scales—1, 2, 5, 10 or 20 miles.

Edo Radar Available For Small Fishing Craft

EDO high performance marine radar especially designed for small craft with limited space and generator capacity, has been put on the market by the Edo Corporation. It is a thoroughly tested radar of exceptional accuracy and reliability. Priced in the lowest cost bracket, Edo Radar brings the safety and economy of radar navigation within the means of owners of small boats. This Radar provides clear, precise definition of shore line, buoys, boats or other hazards on five scales —1, 2, 5, 10 or 20 miles—and shows objects as close as 25 yards. Thus it is satisfactorily used in both open and restricted waters. Bearing and range accuracy is rated at plus or minus 2%. On the 2-mile range two objects on the same bearing may be differentiated if they differ in range by as little as 30 yards.

The PPI unit can be mounted, for greatest convenience, on bulkhead, desk or overhead and is designed for greatest possible ease of viewing and operation. The display is presented on a long-intensity cathode ray tube, 7" in diameter. An illuminated bearing scale, calibrated to every degree, zero to 180° to zero, is mounted around the edge of the tube.

Power supply, receiver and distribution unit can be mounted in any convenient location. Use of the equipment causes no interference with other electronic navigation devices carried aboard.

Power input into the equipment is 375 watts, and the motor generator with voltage regulation circuit operates at either 115V AC or 32V, 110V or 220V DC input.

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FOR SALE—SURPLUS: Graymarine diesel engine, Series 6-71 with new Snow Nabstedt 2:1 reverse and reduction gear unit. Engine has been thoroughly overhauled and has new pistons, liners, pins, rings, bearings, valves, guides and other parts. Injectors are 60 m.m. Electrical system is 32-volt with new generator and new starter. This engine has been thoroughly run in our shop and is in perfect condition, $2300. OSWALD MACHINE WORKS, 2936 Hyde St., San Francisco, Calif. Phone: ORdway 3-4364.

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FOR SALE: 65' Seiner-Tender-Troller, 172 HP Buda diesel, Twin Disc 2:1, 65 Watt Northern, D.F., Pilot, Bendix Recorder, Loran, 45 ton, $14,000. 50' No. troller, blt. 1950, 225 HP G.M.C., D.F., radio, pilot, 20 ton, $16,000. **SUN HARBOR MARINA**, 5104 Harbor Drive, San Diego, Calif. AC-2-1291

FOR SALE: Purse seiner "Sea Rider," 74x20, twin 6-71 GM engines. Sardine net and partial tuna net. Depth recorder, radiotelephone. 1725 7th St., San Pedro, Calif. Phone TErminal 2-6656.

H. T. ANDERSON

"Herb" Anderson Appointed Sales Engineer for Nordberg

Appointment of H. T. "Herb" Anders as sales engineer in Pacific Coast territo is announced by R. W. Bayerlein, vic president, heavy machinery division, Nor berg Mfg. Co., Milwaukee. Mr. Anders will assist C. G. Cox, Pacific Coast distr manager, serving California, Oregon, Was ington, Idaho, Nevada, Utah and Arizo

While holding the positions of design e gineer, project engineer, manager of t New York district office, and assistant ge eral sales manager for Enterprise Eng & Machinery Company, Mr. Anderson h gained a comprehensive background in t design, production, and sales of diesel e gines. As manager of the New York off for eight years, he established an envia reputation for directing sales and was p moted to assistant general sales mana in 1953.

Mr. Anderson is a member of the P peller Club of the United States and associate member of the Society of Na Architects and Marine Engineers.

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New plant of the Hart and Burns Company, Riverside, California. Manufacturers of Navicote and Durahart, protective coatings, the company recently became a division of Devoe and Raynolds Co., Inc.

Hart and Burns Finishes Vital to Fishing Vessels

The Hart and Burns Co., manufacturers of Navicote and Durahart, recently becoming a division of Devoe and Raynolds Co., Inc., was the brainchild of Arthur E. Burns, Jr., who helped the U. S. Navy develop a marine fishish that kept Navy vessels in the water for longer periods than were possible before.

The Riverside plant of the Hart and Burns Co. was established in early 1946 and expanded into new and larger quarters in 1952.

Navicote "SM" is effective with the most prolific fouling organisms in all waters of the world, claim the manufacturers, with the chemical reaction of "SM" continuous, lasting the entire life of the coating. Release of the copper toxic is controlled at a steady, uniform rate by the specially formulated matrix.

West Coast distributors of the Navicote protective coating line include Frederick Goertz, Ltd., Vancouver, B. C.; Seattle Marine & Fishing Supply, Seattle; Yaquina Bay Marine Supply, Newport, Ore.; Fleet Craft Marine Sales, Los Angeles; West Coast Marine Supply, Coos Bay, Ore.; John G. Rapp Co., San Francisco; Atwell Supply Co., San Diego; the Beebe Co., Portland; Weeks Howe & Emerson, San Francisco; Marine Components, Santa Monica.

Hart and Burns Company's Navicote finishes are made for all marine equipment and include Navicote Copper, Fisherman's Plastic, 7-11 Copper and Navicote Anti-Corrosive ship bottom paints; primers; hull and topside finishes in a wide variety of colors; engine finishes; deck finishes; boottopping; cabin finishes; fresh hard water racing finishes; scow paint; brine resistant finishes; varnishes; and several marine specialties.

J. M. Creager is president of the newly created division of Devoe and Raynolds. Earl Huston, Jr., is vice president in charge of sales and Arthur E. Burns is vice president in charge of research and production.

Apex Marine Firm Wins P&H Diesel Distributorship

Harnischfeger Corporation has appointed Apex Marine and Equipment Co. of Seattle as Pacific Northwest marine and industrial distributors for P&H diesel engines, according to Lionel Atkinson, Northwest District representative for the P&H Diesel Engine Division of Harnischfeger Corporation.

The expanding Apex Marine & Equipment Co. has been preparing to move its store and service facilities from the Ballard district in Seattle to the shore of Lake Union, where its new address, on or about May 1, will be 2100 Westlake North. From its new location it will handle sales, service and parts for P&H diesels.

Officers of the Apex firm include Neil McLeod, president, nationally known in diesel engineering; James Chivall, vice-president, newly elected a commander in the U. S. Navy Bureau of Ships; and Corb Kenyon, secretary-treasurer.

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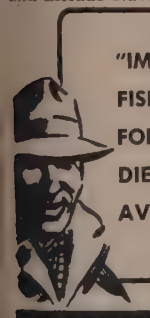

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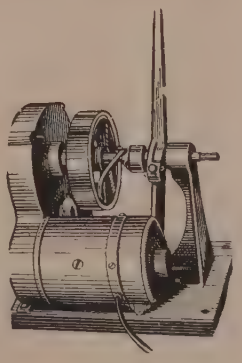

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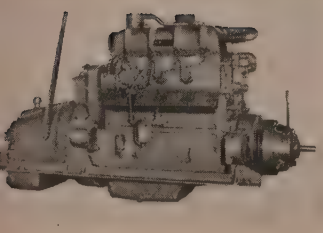

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Judging Salmon—Teams of judges scrutinizing the 700 cans of salmon inspected at the 1955 Annual Salmon Cutting sponsored by the Northwest Branch, National Canners Association. They found the pack of 1955 generally good in quality, particularly the Chums.

How High is Quality?

And How Do We Achieve It?

The 17th annual Salmon Cutting Demonstration, held at Seattle in March under the auspices of the Northwest Branch, National Canners Association, gave a sharp look at the vital matter of Quality. The look extended to more than 700 sample cans, drawn at random from the 1954 pack, and judged by committees in which diverse viewpoints were represented.

Primary purpose was a critical examination, by all concerned, of the results of last year's operations, with a view to continued improvement in every way possible. More than 160 men participated in the judging function, and several hundred more came in later to inspect the samples and review the ratings given by the judges.

Following the cutting itself, in the afternoon, the results were discussed by Walter Yonker, chemist of the Northwest Branch; and the gathering was addressed by Douglas Hanson, chief inspector for the U.S. Food & Drug Administration in the Seattle district, on "Our Mutual Obligations", and Harry R. Beard of the New England Fish Co. on "Icing Cannery Salmon".

Mr. Hanson congratulated the packers on the improvement in their product, attained through sincere, voluntary effort, since the "Better Salmon Control" plan was initiated some twenty years ago. Fulfillment of this obligation, he declared, cannot fail to result in consumer satisfaction.

Mr. Beard referred to liberal use of ice as, at present, the most effective, practical and economical way to keep fish in prime condition from time of catching to processing, but pointed out the great difference in progress of deterioration between temperatures of 32° and 37°, and the futility of inadequate icing.

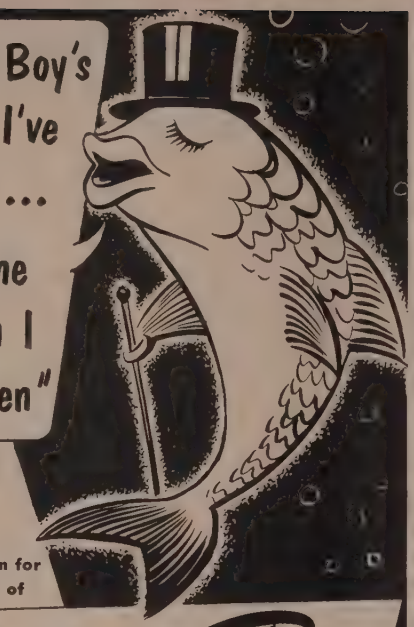
At a recent development, Mr. Beard mentioned chilled sea water as having some special advantages: it cools the fish very fast, and it saves considerable labor, but requires expensive equipment. (See *Pacific Fisherman* for April, 1955, Page 31.) Use of chemicals in ice has encountered some obstacles, but may have possibilities; experiments with minute quantities of aureomycin have appeared promising.

Mr. Yonker, instead of presenting an analytical review of the "verdicts" of judging committees, made a comparison between the general results of the cutting and those of the season's pack inspection by the Northwest Branch examiners, which—for the most part, and with some slight discrepancies—were fairly similar. He was impressed by the generally high quality of the Chum pack: some of the Chums having remarkably good oil.

Aside from considerable irregularity in salting (which he thought indicated a possibility of serious trouble) he noted a continued improvement in machine control: sealing was almost universally good, and filling was better than in the past, with much less overfilling; and cleaning was good. Processing showed need of greater vigilance in some quarters, and desirability of more widespread use of automatic control and recording equipment.

In opening the afternoon proceedings Guy V. Graham, president of the Association of Pacific Fisheries, who served as chairman, introduced Dr. Ira Somers, head of the N.C.A. laboratory at Berkeley, Calif., and George E. Steele, Jr., who recently succeeded Charles R. Carry as head of the fishery products division of the National Canners Association at Washington, D.C., who was making a tour of the Pacific fish-canning districts.

"Butcher Boy's the one I've chosen..... To cut me up when I am frozen"



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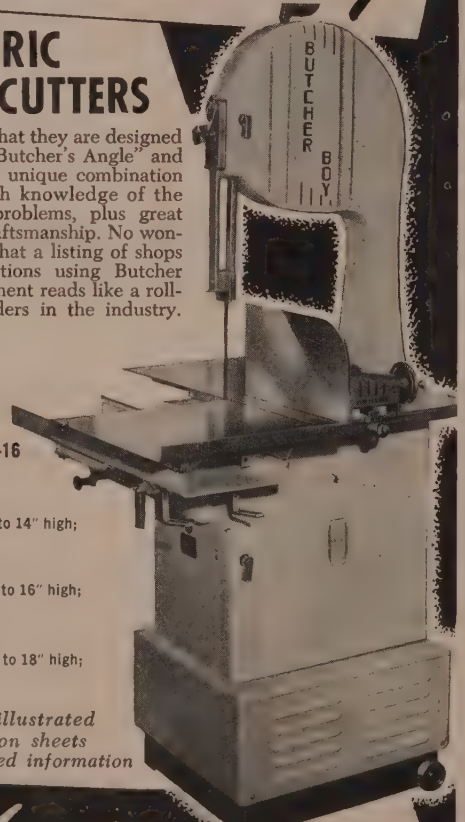

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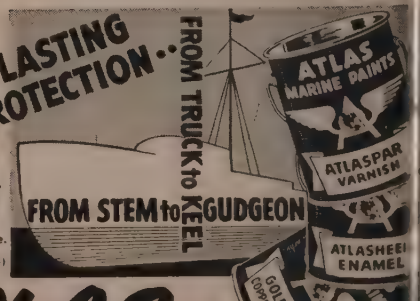

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ATLAS MARINE PAINTS

Five Fishermen's fish sticks cutting, breading and frying line in the San Francisco plant where it packs **Lucky Fisherman** frozen fish sticks dinner. Precision-cut sticks from the Butcher Boy saws enter the picture at the extreme right, progressing through the first dry breading conveyor, then to batter, finish breading and the frying conveyor. Packaging equipment on the left.

"Lucky Fisherman" • • •

• He has a Fish Stick Dinner

• We've all heard of, and perhaps eaten, TV dinners, frozen complete meals. Here's a new one; thought to be the West's first fish stick dinner, produced by Five Fishermen, Inc., Pier 92, San Francisco.

President and leading spirit of Five Fishermen, Inc. is George J. Christo, prominent in the California sardine industry and head of the Northern Packing Co.

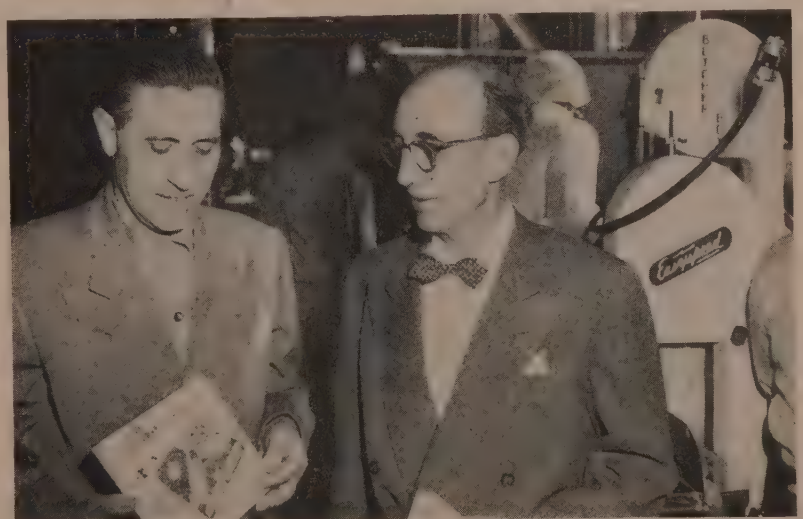
Mr. Christo's fish stick dinner consists of a portion of fish sticks, breaded and pre-cooked; frozen peas with a pat of butter; cocktail sauce, and French-fried potatos. These are packed by hand on an aluminum dish; covered with aluminum foil, put in a Marathon food carton which has a Louis Roesch Co. lithographed label, complete with directions, and then wrapped in cellophane on a Schooler wrapping machine.

Finally the "Lucky Fisherman" fish stick dinners are packed in Fibreboard Products, Inc., shipping cartons, 12 to the carton, and frozen.

• Five Fishermen Inc., also pack fish sticks under the "Lucky Fisherman" brand, 10 sticks to a 10-oz. Fibreboard Products, Inc., food carton. The cartons are then wrapped in attractively lithographed Western Waxed Paper Co. wrappers on a Battle Creek wrapping machine, supplied by King Sales Co. The cartons are packed in Longview Fibre shipping cases and frozen.

"Lucky Fisherman" fish sticks start in the raw from 7½-lb. blocks of frozen Island or Newfoundland cod, provided by Amende & Schultz, Los Angeles. These blocks are first cut on a Butcher Boy fish-cutter into three sections; next they go to another Butcher Boy which cuts the pieces to 3¾" wide, and finally to a third saw which cuts the sticks to standard size.

The sticks go from the last saw to



George Christo, right, president of Five Fishermen, Inc., discusses the firm's **Lucky Fisherman** fish stick dinner package with George Morf, company secretary. To the right is seen the second of the two Butcher Boy band saws serving the plant. The first Butcher Boy parts the fillet blocks and the saw seen here cuts the sticks, which then pass at once to the breading line behind Mr. Christo.

Lucky Fisherman fish stix dinners take these essential steps. On the left, conveyor carries the dry-breaded sticks into the batter dip. Careful women workers make-up the aluminum foil trays for freezing. Note peas in the foreground; and the Fibreboard food cartons used when the line is packing fish sticks instead of dinners, both specialties being packed on the same line.

a vibrator which separates them, and then to a pre-dusting conveyor. Both *Golden Dipt* and *Modern Maid* breading materials and batter mix are used. After being breaded, the sticks go through the batter mix, then on a draining conveyor, and are then breaded again. The excess breading is shaken off on another conveyor.

From this last shaking, the sticks move into the specially built fryer. This fryer, heated with gas, develops 1,500,000 BTU. Vegetable Oil Products Co., Inc., hydrogenated cotton-seed cooking oil is used. The sticks go through the cooker in about one minute, riding on a stainless steel mesh belt built and furnished by the Cyclone Fence Dept., American Steel & Wire Division, U. S. Steel Corporation.

The sticks drain coming out of the

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BUT we also have something NEW!...

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FIVE FISHERMEN, Inc.

PIER 92, SAN FRANCISCO, CALIF.

cooker, and the excess oil is filtered through a Merco continuous filter, and cooled before returning to the cooker. The stick line makes a right-angle turn, going through a 25′ cooling tunnel, equipped with cooling fans and air filters. Another right-angle turn brings the fish sticks onto a stainless steel packing table.

The fish sticks are packed by hand by 30 women packers. On the upper part of the packing table runs a neoprene belt which takes the packed cartons to the wrapping machine.

Immediately after the *Lucky Fisherman* sticks and dinners are packed they are trucked to a custom freezing plant close-by, where they are frozen and subsequently stored under conditions applying the highest type of modern refrigeration technique.

Capacity of the plant is about one ton of raw fish per hour, according to Mr. Christo. Jack Wacker, who has been associated with Mr. Christo for many years, is plant manager, and Andy Kalpakoff is superintendent. George Morf is secretary of the company.

Both the "Lucky Fisherman" fish stick dinner and the "Lucky Fisherman" fish sticks are distributed in northern California by Wm. Howard Co., and by other food brokers in other parts of the country.

G. R. Clark Appointed To N. Pacific Commission

George R. Clark, who early in the year succeeded Dr. Stewart Bates as deputy minister of fisheries of Canada, in March was also appointed to fill the vacancy resulting from the resignation of Dr. Bates on the International North Pacific Fisheries Commission, which represents the United States, Canada and Japan in the study of problems in waters fished by the three nations.

C.R.P.A. Breaks Records, Makes Handsome Profit

T. F. Sandoz, president of the Columbia River Packers Association, Inc., at the first of April reported to his shareholders that the company in 1954 had established new records in gross sales and in volume of pack, closing the year with a net profit after taxes of $496,385.

Sales for the year reached $15,246,672, while the company's canned pack of 902,123 cases was the largest in its history. Composition of the canned pack was: Alaska salmon, 45,429 cases; Puget Sound salmon, 139,873 cases; Columbia River salmon, 119,922 cases; tuna, 586,669 cases; crab, 10,230 cases.

Reflecting the company's interest in biological research, Mr. Sandoz concludes his report with these words:

"Your company is conscious of the problems and confident of their solution through the scientific approach."

Damage to Karluk Spawning Is Variable

Considerable, but widely variable, damage was one to Red salmon spawning areas and early spawn deposition on a number of important salmon streams of the Karluk area of Kodiak Island by a heavy storm last August.

Fish and Wildlife Service biologists examined the Karluk Lake, Red River Lake, Upper Station Lakes and Akalura Lake spawning tributaries closely. Damage in the latter two areas was unimportant.

Eight of the tributary streams to Karluk Lake showed very severe spawn damage, while seven others appeared to have suffered little or not at all.

Careful examination of tributaries to Red River Lake indicated extremely severe damage to the spawn laid down by the early part of the Red River run.

Traps will be used in the damaged streams this spring in an effort to assess the effect of the storm upon survival of fry migrating into the lake.

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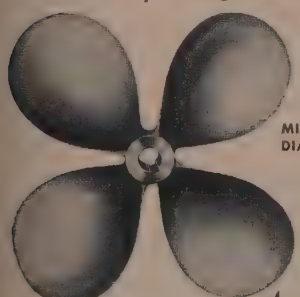

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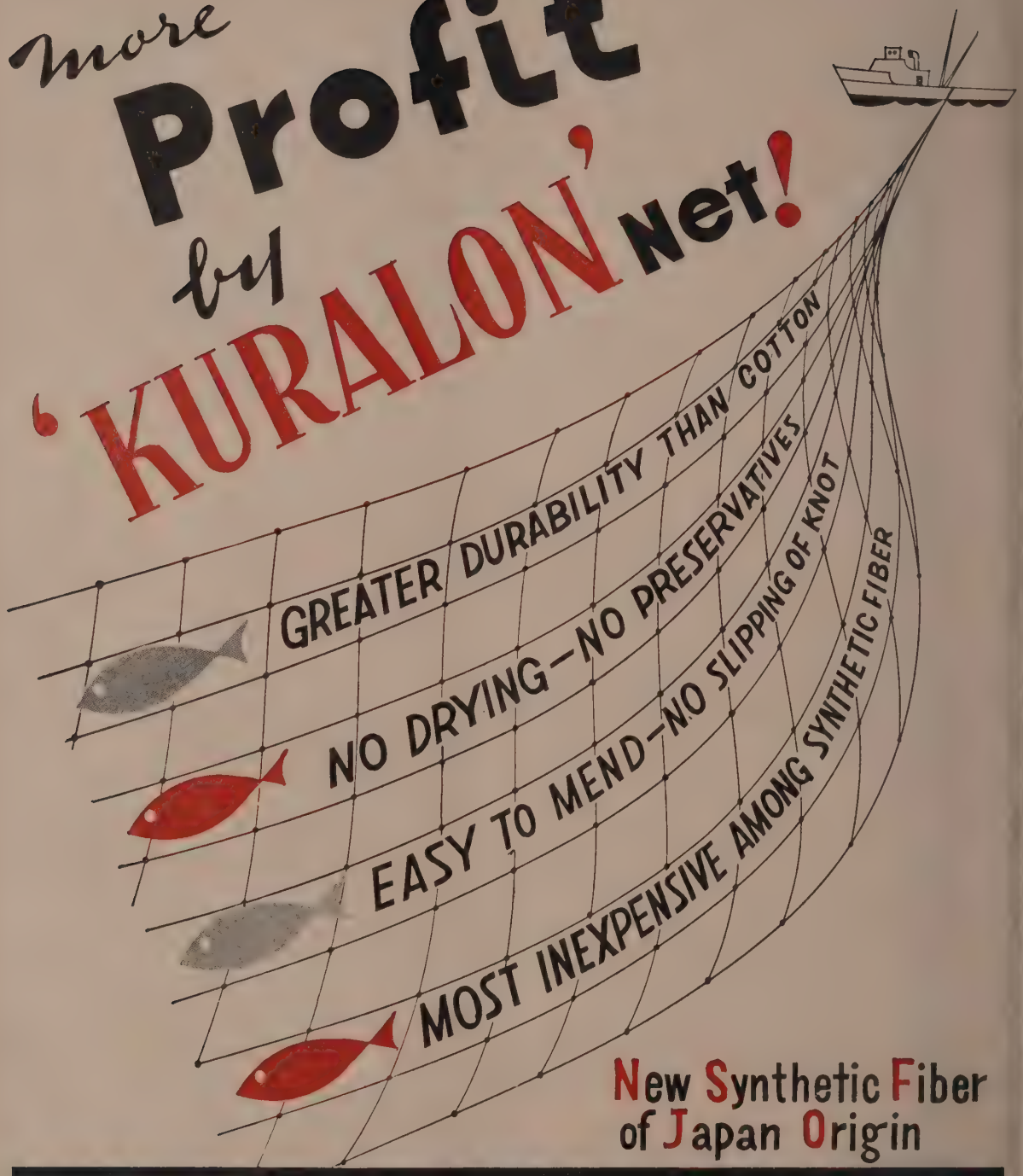
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eSilva New President f South Coast Fisheries

J. S. DeSilva is the new president South Coast Fisheries, Inc., Terinal Island, succeeding Peter A. ulgis, who died February 21. Deilva is a former president of the Calirnia Fish Canners Association, and one of the able young executives the fish canning industry of Southrn California.

lew Cannery Building or Cordova Cold Storage

Cordova Fish & Cold Storage Co.'s almon cannery at Cordova, Alaska, tarts the 1955 season in a new buildng, it is announced by Joe Balestrieri of Joe Balestrieri & Co., San Franisco, who is president of the Cordova oncern.

The cannery, of frame construction, s 40 x 150'. Equipment includes an "Iron Chink"; two American Can Co. closing machines, one for halves and one for the 4-lb. institutional pack, and two Bellingham Iron Works retorts. Mr. Balestrieri says the Cordova company last year canned 20,000 cases of halves (48) and 15,000 cases of 4-lbs., of salmon. It also produced 250,000 lbs. of picked crabmeat, and expects to about equal that figure in 1955.

Output of the Cordova Fish & Cold Storage Co. is marketed through Joe Balestrieri & Co., San Francisco. Frank Swartzbacker is superintendent of the plant.

Seldovia Bay Tender to Carry Salmon in Chilled Sea Water

What looks like a development of prime importance in the transportation of salmon for canning—carrying the fish in chilled sea water—will be tried on a substantial scale this season by the Seldovia Bay Packing Co., in connection with its cannery operation at Seldovia, Alaska. This follows highly encouraging results of a small-scale test last year, which in turn was based on Canadian experiments.

For this purpose the company is using the 86′ power scow *Dorothea* (former Army "BSP 3133"), mounting five big insulated steel tanks on the forward deck, with pumps to control the sea-water supply, and installing refrigerating machinery and other special equipment in the quarters aft.

Three of the tanks are set in a row athwartships, just forward of the house; then, forward of a narrow alley and just aft of the anchor winch, are two more tanks. At the port and starboard ends of the alley are vertical adjustable steel elevators to raise the fish from deck-level, to be distributed through portable chutes to the hatches of the tanks.

Each tank has a water-tight "guillotine"-type gate opening on the alley, and in operation the elevators will be raised a couple of feet to permit the fish to sluice out through the alley to the boot of the cannery elevator, making the unloading practically automatic. Total carrying capacity of the five tanks is calculated at 32,000 Red salmon, with ample sea water to keep them chilled.

The plan is to leave the cannery with the tanks brim-full of clean seawater, which will be brought down to a temperature of 30° F. during the run to the fishing grounds. As salmon are taken aboard, enough water will be overflowed to make room for them; enough being retained to complete surround all fish and absorb their heat rapidly.

Previous results indicate that this will bring the fish down to just above freezing temperature very quickly, and hold them constantly at that level. A further advantage of the system is that the fish, immersed in sea water, will have enough buoyancy to prevent any crushing of those at the bottom.

Canadian experiments are said to have indicated that salmon can be held in this way for a full two weeks in prime condition. Harry Tallman, vice-president and manager of the Seldovia Bay Packing Co., says no such holding is contemplated in his operation; but in his trial of the system last year, the fish came out after a couple of days in the chilled sea water in notably fresh, bright condition, in rather sharp contrast to those handled in the customary manner after a similar period.

A problem encountered in equipping the *Dorothea*—a power scow of comparatively shoal draft—for this purpose was that of keeping the weight down to assure stability and seaworthiness. The weight of the tanks, when filled with sea water, had to be nicely calculated and not allowed to rise too high above deck.

The *Dorothea* was built in 1945 by the Pacific Boat Building Co., Tacoma. In outfitting her for the new service, the overhauling, alterations and general carpenter work were done by Prothero Boat Co., Seattle; steel construction—tanks, elevators, etc.—by Flohr & Co.; installation of refrigeration equipment (Worthington), by Puget Sound Engineering, Inc.; electrical equipment by Peter Woeck of West Seattle Service & Repair.

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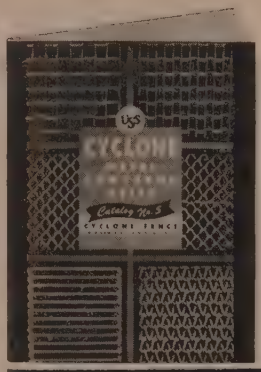

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PLASTIC FLOATS

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FOOD FISH MARKETING

News and Views of National Trade in Fish and Shellfish

Section of PACIFIC FISHERMAN-- May, 1955

"Summertime is Tuna Time" Theme of National Program

A promotion program that should be a big boost for sales of canned tuna was announced just before Easter by the Fish and Wildlife Service.

The industry-wide program, sponsored by the Tuna Research Foundation, with the full support and cooperation of the U. S. Department of Interior and the Department of Agriculture, is "Summertime Is Tuna Time," and will run from June 2 through June 11.

Douglas McKay, Secretary of the Interior, on the day following announcement wired retailer organizations, requesting their full support.

From the Department, press releases went out to all food editors, radio and television commentators, and the full staff of 30 field personnel of the FAWS has been detailed to work on the promotion exclusively.

The Department of Agriculture is supporting the program through Extension Agents throughout the country and through regular press releases. Tuna will be featured in school luncheon programs.

The Tuna Research Foundation is conducting a mailing announcing the program and the availability of brochures and banners on "Summertime Is Tuna Time" to all brokers and retailers.

In E. L. Morris' letter to retailers throughout the country (he is director of the Foundation), he states:

"Canned tuna is in plentiful supply, in fact, inventories are excessive and must be reduced in order that fishermen can continue to fish and cannery workers continue to be employed. Hence, government interest and support.

"Canned tuna is being offered at the lowest prices in years, bringing extra value in this protein-rich food to consumers everywhere. Quality is at its peak."

Members of the Tuna Research Foundation's Advertising Committee are James R. Barry, chairman; Robert Debnam; Harold Requa, H. C. Kavalaris, Henry Abts, Jr., and Wm. C. Morehead.

Canned Salmon Situation Is Remarkably Healthy

Comparative quiet followed the activity of the Lenten drive in the primary market for canned salmon — quiet due mainly to the almost complete exhaustion of first-hand supplies of most varieties; in part, also, to the fact that the trade had made provision, before or during Lent, for the bulk of its early spring needs of such items as could be obtained.

Sellers, however, declare business is not less active than usual at this date; and the usual concessionary feeling with the approach of tax-assessment day, April 30, has been noticeably lacking. Buyers in general are working on a hand-to-mouth basis but, while many have given up hope of replenishing their supply of the sold-out items, there is still considerable interest in such varieties, and there would evidently be plenty of business if the goods were available.

Basically, the situation looks remarkably healthy. Old-timers say they have never seen first-hand stocks, in general, so light as this time of year—with no really substantial supply of anything but Sockeye halves; the best consuming season just ahead, and no new-pack goods in any real quantity available for several months. This early cleanup—with a total pack about 275,000 cases larger than in 1953; with higher average prices, and against intensified competition from other foods—is attributed largely to a better job of selling, on the part of packers, brokers and the trade at large.

The remaining unsold supplies are mostly in a few strong hands and, except for Puget Sound Sockeyes, are very small and closely held; and the holders of Sockeyes, anticipating a small pack this year, are standing firm, in the confidence of a ready market during the coming season. Alaska Red halves are still fairly plentiful, but some are held at higher prices, with the freezership pack said to be completely sold out. Red talls, if any can be found, would readily bring $29. A few Sockeye 1-lb. flats are available at $30.

Pinks, of course, have been off the market for over a month—last sales at $22, talls, and $14, halves; and Cohoes are to be had from few sources and in very small quantities. There are said to be a good many small lots of King or Chinook halves, in a variety of grades, from various sources and at a wide range of prices, some of which may be carried into the new packing season. The supply of Chum talls is running rather low: there appear to be still enough halves for all immediate needs, but another month or so should see the last of them. Some Canadian Chums are coming in, selling at the same range as domestic.

SEATTLE MARKET

Prices openly quoted at presstime, f.o.b. Pacific terminals, for cases of 48 cans, unadvertised brands. Advertised brands of some principal items are priced somewhat higher.

Alaska Salmon	
Red or Sockeye, talls	$ 29.00
Red or Sockeye, halves	16.00-17.00
King or Chinook, halves	15.00-17.00
Medium Red or Coho, talls	25.00
Medium Red or Coho, halves	14.00
Chum, talls (summer)	16.50-17.00
Chum, halves	9.50
Puget Sound	
Sockeye, halves	16.50-17.50
Sockeye, quarters	9.50-10.00
Coho, quarters	8.50
Chum, talls	16.50-17.00

Bay Fish Co. Leases Whiz Station

The Bay Fish Co., Westport, Wash., has leased the Whiz Fish Co.'s buying station and barge at the end of the Westhaven dock. Les Welch, well-known fish buyer, is in charge.

Tuna Sales Increase At Slightly Lower Prices

There was every indication that sales of California tuna were up, and that the expected Lenten reduction of inventory had taken place, as this issue closed.

The Fish and Wildlife Service office at San Pedro reported very little variation in canned tuna prices, f.o.b. canner's terminal, during late February and the first weeks of March. On March 1 light meat chunk, advertised brands, forming the bulk of canned tuna production, was listed by FAWS as selling for $13.50 a case of 48's, 6½ oz.; private labels, 6½ oz., 48's, $10.00 to $12.00.

As of the end of March, there was a reduction in the prices of advertised light meat chunk of about 25c per case; in private label, of about 50c. This based on Fish and Wildlife Service reports.

It must be noted that, coincidental with the reduction of canned tuna inventory from California production, there was a decided decrease in canning operations during February and March, with most of the major canneries processing no tuna. From Jan. 1 through March 19, only 24,727 tons of tuna had been delivered to Southern California canneries, as compared to 31,997 tons for a similar period in 1950; and of this, imports of frozen tuna accounted for almost 10,000 tons.

Canners and producers alike agree there is still a lot of tuna afloat and in cans which must be sold, if the industry is to return to its former healthy state.

March newspaper advertising in the Southern California area showed a noticeable reduction in the "leader" prices of advertised brands of chunk tuna. Ralph's Los Angeles was offering *Chicken of the Sea* light meat chunk, 6½ oz. can, for 25c. The same day the same paper carried ads listing *Star Kist* chunk for 27c. *Breast O' Chicken* was advertised for 27c at Thriftimart. The new *Carnation* tuna label, packed by California Marine Curing & Packing Co., was appearing steadily in advertising during March, generally at 27c for chunk.

During March a full page ad in color appeared in newspapers, in cooperation with a Kraft product, featuring Kraft dinner tuna loaf.

Cheerful note in the tuna sales picture comes from Westgate-California Tuna Packing Co. (*Breast O' Chicken*) which reports that this brand set an all-time record of sales volume for the company during 1954. The San Diego tuna cannery utilizes Market Research Corp. for surveys which, in this particular case, showed that *Breast O' Chicken* sales were 14% higher in 1954 than in 1953.

Through the Tuna Research Foundation, Terminal Island, tuna received a boost as featured in "Tuna and Rice Casserole," in connection with National Rice Week and General Foods Minute Rice.

Clam Season Ends

The razor clam season on northern Grays Harbor beaches — the only Washington beaches open to commercial digging—opened March 1 and closed at midnight March 28, its quota of 500,000 lbs. having been almost reached by the 25th. Prices to diggers through the short season ranged from 10 to 13c per lb.

Freeman Certi-fresh, Los Angeles, now owned by Rupert Fish Co., had added Fish'nChips, pre-cooked, to its versatile line of fish and seafood products.

True cod is used for the sticks, fished and prepared at the Theo. Weissich Fish Co., Eureka, Calif. There are four in each package, plus potatoes of Idaho origin. Marathon provides the carton, and Milprint the over-wrap.

Rubinstein Companies Will Move to Northlake

Sam Rubinstein and various fishery companies whose operation he handles plan to move early this summer —after many years in the Central Bldg., Seattle—to new headquarters on Lake Union, just southwest of the Seattle gas works, where they will have good-sized vessel mooring facilities as well as offices. Dock piling and foundations for the building were completed by the end of March, and construction of the building is proceeding rapidly.

Among the companies to occupy the new location are Whitney & Co., long-established marketing agency for canned salmon and other North Pacific products; Carl Rubinstein Co., which now owns and operates the freezership *Reefer King* and is no longer listed among the sales agencies; Farwest Wrangell Co., canning salmon at Wrangell, Alaska; and Seldovia Bay Packing Co., canning salmon at Seldovia.

They Feature "Carnation"—John G. Mitchell, left, is president of Pacific Salmon Associates, Inc., newly-formed group of salmon canners which will market jointly under the "Carnation" label. On the right is James R. Barry, head of J. R. Barry & Co., Terminal Island, Calif., which will handle Pacific Salmon Associates' sales through a branch in Seattle, with James Milligan in charge.

J. N. Milligan Managing Barry's Seattle Office

James N. Milligan, for many years active in the canned foods merchandising business, is announced as manager of the new Seattle office of J. R. Barry & Co. of Terminal Island, Calif. His headquarters are at 204 Colman Building.

"Jim" Milligan for many years managed the IGA office in Seattle, subsequently being connected with several of the leading salmon brokerage houses.

His entrance to his new position is opportunely timed just as the Barry Company has been announced as national exclusive sales representatives of *Carnation* brand canned salmon by appointment of the Pacific Salmon Associates. The Barry Company, in addition to sale of *Carnation* brand canned salmon, will offer full line of canned salmon through their brokers to the trade under packers' and buyers' labels; which, of course, is supplemental to the distribution already attained nationally in the sale of *Carnation* brand creamed tuna and regular tuna in light meat and Albacore.

Packing Shad Roe

Bell Smoked Fish Co., Fishermen's Wharf, San Francisco, started packing shad roe last month, according to Joe C. Tarantino, managing partner.

America's best advertised brand of salmon

BUMBLE BEE
Seafoods
COLUMBIA RIVER PACKERS ASSN., Inc.
Astoria, Oregon

PREMIUM QUALITY!
NATIONALLY ADVERTISED!
BREAST-O'-CHICKEN BRAND
Fancy Solid Pack
HI PROTEIN TUNA

BREAST-O'-CHICKEN TUNA, INC.
28th Street and Harbor Dr. San Diego, Cal.

They Add Up To A Lot of Sales!

Oceanic
SALES COMPANY
3302 SMITH TOWER
SEATTLE 4, WASH.

Japan Sets 1.5 Million Cases Tuna for U. S. Sale

Japan expects to be prepared to ship to the United States market 1,500,000 cases of canned tuna in 1955. Of this, 700,000 cases will come from carryover, while the new pack target for 1955 has been set at 800,000 cases for U. S. shipment.

This action was taken at the end of March by the Japan Canned Tuna Industry Cooperative Association.

At the same time, to expedite the movement of the carryover stock to the American market, a slight cut in export prices was considered inevitable, on the basis of top-rank representatives—the burden of such cut to be shared between packers and export traders.

The meeting also resolved that no brine-pack tuna should be produced this year except for the United States. This was to prevent such goods originally destined for other markets, from finding their way into the United States.

The 800,000-case contemplated production is being allocated among the members of the association. Of the total, 560,000 cases (70%) will be allocated on the basis of previous records, while 240,000 cases will be handled as a so-called "free frame."

It is noted that this association is being reorganized along more formal lines, to be called "Japan Canned Tuna Export-Marine Products Industrial Association.

PACIFIC PEARL

CRAB - SALMON - TUNA
CLAMS - OYSTERS
IVAR WENDT
Exclusive Sales Agents
701 Central Bldg., Seattle 4, Wash.
Telephone Eliot 1272 - Teletype SE-573

"Deming's" Tuna Sales Initiated in April

Pacific American Fisheries, Inc., Bellingham, Wash., long leaders in the salmon canning industry, has announced that it began marketing tuna through its sales subsidiary, Deming & Gould in April.

"One important benefit of this added volume is that it effects economies in shipments of assorted cars to our customers," stated Howard L. Scott, vice president of Pacific American Fisheries.

The tuna will be marketed under *Deming's* brand in fancy solid pack Albacore, fancy solid pack light meat and chunk style light meat.

Harrison Sales Firm Succeeds Wm. H. Stanley

The old New York brokerage house of Wm. H. Stanley, Inc., discontinued business with March, and is being succeeded as New York area distributors for *Bumble Bee* seafoods packed by the Columbia River Packers Association by Harrison Sales. Ameln Brothers, importers of Scandinavian products, are also represented.

This firm is composed of E. W. Harrison and W. J. Harrison, partners. They, with M. H. Canedy, were the stockholders in Wm. H. Staley, Inc. The Harrison Sales staff will include Gustave Volence, George F. Meeker, Hugh M. Gillson, Jack K. Kennedy, Miss M. McCrann, R. Stuart Lay, David Breakstone and Mrs. L. Leopardi, all former Stanley employes.

Headquarters continues in the former Stanley location at 103 East 125th St., New York 35.

Sidney Cohn Dies

Sidney Cohn, for 16 years affiliated with Central Fish & Oyster Co., Los Angeles, fresh and frozen seafood packer, died April 4 at his home, of a heart attack.

ROBERT L. STIX, INC.,
National Sales Representatives
We are pleased to announce the opening of our Los Angeles office—
114 South Central Ave.
Los Angeles 12, Calif.
Tel: Michigan 2525

So much depends on the oil!

● The delicate flavor... the tempting freshness of your finest canned fish can be entrusted to Archer "S" because this clear, bland soybean oil has had every trace of odor removed by a special refining process. Also, you get the same high quality oil *every time you order*. Archer "S" *can't* vary. It's refined not in batches, but as an endless "ribbon" of oil. By streamlining refining, we are able to *streamline the cost* of Archer "S" too. Ask us for samples and prices.
Improve the Flavor... pack with
Archer "S"
America's Finest Soybean Salad Oil
Archer-Daniels-Midland company
700 Investors Bldg., Minneapolis, Minn.

miling Technologists—At the "Spa of Canada" for their 1955 meeting. om the left: Robert K. Pedersen, Star-Kist Foods, Terminal Island, alif.; P. A. Sunderland, British Columbia Packers; Dr. Lionel Farber, ooper Foundation, University of California; Lorne Ford, The Canadian Fishing Co.; George Wilkinson, Coast Fisheries Division, Quaker Oats Co.; Dr. H. L. A. Tarr and J. S. M. Harrison, Pacific Experimental Station, Fisheries Research Board of Canda; D. C. McVeigh, Canadian National Railways.

Technologists of Two Nations—From the left: Dr. G. Ivor Jones, National Canners Association; Phil Callahan, Libby, McNeill & Libby; .. G. Germaine, American Can Co.; Dr. Neal Carter, Fisheries Research Board of Canada; Miss Mary Allman, Canadian Department of Fisheries; Dr. Lyle A. Swain, Pacific Experimental Station, Vancouver; Maurice Stansby, Seattle Technological Laboratory, U.S. Fish and Wildlife Service.

Fish Quality First

In Putting Up Good Sticks

● Good processing helps, of course, and so does effective packaging, but fish sticks can be no better than the raw material from which they are produced, Charles Butler, chief technologist of the U. S. Fish and Wild Life Service, told the sixth annual conference of Pacific Fisheries Technologists at Harrison Hot Springs Hotel, B. C., March 27-30. He described how this new product had made spectacular gains in the market in the U. S. and Canadà, giving promise of winning over many consumers who in the past had neglected fish items in their buying and eating habits. He stressed the importance of maintaining high quality to retain markets already won and to win new ones.

Fish sticks, while one of the most interesting subjects dealt with by the technologists, had several competitors for the attention of the 70 delegates, representing packing companies, industry agencies, transportation organizations and government services. Fish transportation, fish oil, nutritional uses of fish proteins and analytical methods were among the other major topics on which papers were presented.

● Incidentally, the Harrison meeting held a test of its own, with fish sticks prepared in various ways by different processors being set before a taste and examining panel of ten men chosen from the group. The various specimens were numbered, but without other identification.

"The trend in consumer preference appears to be towards (1) a relatively large fish stick, (2) with moderate or mild breading, (3) a golden brown color, and (4) not too much seasoning," said Mr. Butler. "A lot depends on workmanship."

Incomplete tests indicated that frozen fish sticks could be stored with safety for what was considered to be a normal storage life for frozen food products. Fish sticks withstood a two months' test with flying colors, but that was not considered a severe enough trial. There was good reason to suppose that they would stand up well over a nine-month period, which was generally considered a normal shelf life for that type of product.

● Martin Heerdt, of the Seattle laboratory, described new trends in equipment and technique in connection with fish sticks. One of his suggestions was that packages should be inverted when being frozen so as to get a more attractive surface. A means of eliminating the "warmed over flavor" was not to over-cook the fish sticks in the first instance. Keeping qualities of fish sticks, he reported, was much better than first expected. Some producers use hydrogenated vegetable shortening with good effect and others found vgetable oil satisfactory. Stabilized fat does a good job in the frying process, with a reasonable amount of free fatty acid to lend color—not more than 2 percent.

Miss Mary Allman, home economist, Canadian department of fisheries, said the product was apparently finding general favor among housewives in the Dominion.

For the examing panel at Harrison, these were the factors on which they were asked to pass judgment in 1, 2, 3 preference: Degree of cooking, container, arrangement, sticking, uniformity; conformity in color, continuity in breading, character of breading, character of flesh, amount of breading; defects such as bones, broken sticks and discoloration; flavor and odor, if any.

● J. S. M. Harrison, of the Pacific Experimental Station, Vancouver, described experiments in the use of refrigerated sea water in the handling of fish on fishing vessels—an operation outlined and illustrated in April *Pacific Fisherman*. He said that the next stage would be the installation of refrigerated sea water tanks in a

purse seiner, the earlier jobs being made in trollers and halibut boats. In the packer, there would be a capacity for 50,000 lbs. of fish, evenly distributed among three tanks, which would be of aluminum (sea-water-resistant B54S) with a special type of aluminum electrode welding instead of the conventional tungsten electrode. Plastic piping would eliminate corrosion factors to some extent.

R. K. Pedersen, of Star-Kist Foods, Terminal Island, Calif., contributed to the discussion on fish transportation, telling how provision was made for improved handling of the catches brought in from increasingly distant points. Losses of fish have made the fishermen anxious to improve transportation and handling facilities, which were primarily at fault.

Conferences among various interested groups — fishermen, shipping companies, boat owners, railroad representatives, longshoremen, agents and others — had been held, and it was hoped that order would be brought out of a somewhat chaotic condition. It was agreed that the improvements should be in six well-defined phases of the operation: 1. Transportation in the fish boats; 2. Better loading of refrigerator ships under tropical conditions; 3. Handling and storage of the ships; 4. Unloading at port of entry; 5. Facilities available between unloading docks and cannery; 6. Handling in the cannery.

The new president of the association is Russell Sinnhuber, of the Oregon Seafoods Laboratory, Astoria, where next spring's annual meeting will probably be held, although Corvallis and Gearhart are in the running. Mr. Sinnhuber succeeded Dr. L. A. Swain, of the Pacific Experimental Station. Scott McLeod, of Columbia Packers, also of Astoria, was elected secretary-treasurer, succeeding P. A. Sunderland, technical supervisor at B. C. Packers' Imperial plant, Steveston.

Regional representatives on the executive committee are: Alaska, Henry Seagran; British Columbia, Reg Bolton; California, George Wilkinson; Hawaii, Fred Jerman; Oregon, Lyle Anderson; Washington, Lou Germain.

Alaska Salmon Labor Contract Negotiations

The season's negotiations between the Alaska Salmon Industry, Inc., and numerous labor unions covering work for the canners had made steady and orderly progress up to the closing of this issue, when a number of contracts had been signed. Wages were being increased again all along the line: the general pattern of the new agreements involving an increase of about 4 to 5½%.

The general basic agreement with the Alaska Fishermen's Union for all areas except Bristol Bay, and supplemental agreements for Kodiak and "Westward," were signed in time for the Alaska Peninsula outfits to start at their usual time, in early March. The supplemental agreement for Cook Inlet was under negotiation early in April; that for Southeast Alaska was to be taken up a little later.

Meanwhile, agreements had been signed with the machinists', carpenters' and radiomen's unions, and negotiations were in progress with the non-resident cannery workers. Negotiations over fish prices on Bristol Bay were expected to commence in late April or early May—this being now the only district in which the fishermen have the status of employees.

Arnie Suomela's Father Dies

Peter Suomela, father of Arnie Suomela, assistant director of the U. S. Fish & Wildlife Service, died March at his home in Ilwaco, Wash., aged 89. Mr. Suomela, a native of Finland, was a resident of Ilwaco for nearly 7 years, and spent most of his life in the fishing industry.

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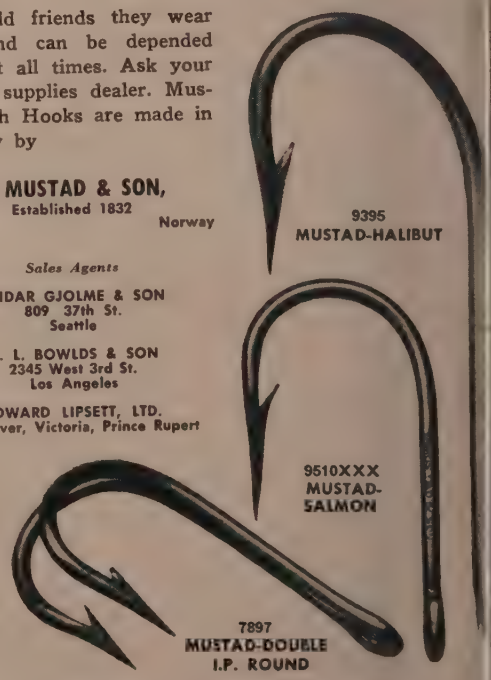


alifornia Tuna perations—March, 1955*

(Does not include San Diego, for which figures were available for March, but here the production was very small.)

San Pedro

Species	Tons
ellowfin	3,205
kipjack	5,362
luefin	62
lbacore	†2,659
ellowtail	6
otal	11,295
ack in cases	515,085

*Approximate figures for tonnage by pecies and total case pack.
†All imported Albacore from Japan.

Opening Prices on Japanese Canned Crab

Japan Canned Crab Sales Co. in mid-March announced opening prices to trading firms for forward bookings of the new Hokkaido spring pack, resuming the pre-war custom of the Federation of Japan Canned Crab Packers Associations.

President Masui of the organization said the prices were only provisional and only for export to U.S.A.; and (especially for "ke-gani") they would apply only to shipments made by the end of May. He told *PACIFIC FISHERMAN'S* correspondent he was considering an early advance over these quotations; and pointed out expressly that the figures are for labeled goods. The prices are as follows:

Opening Net Prices, 1955 Japanese Canned Crab

F.o.b. Yokohama, per case

KING CRAB

Size	Fancy	Fair	Passed-A
24—13-oz.	$23.15	$21.15	$18.65
24—½-lb.	12.23	11.23	9.98
48—½-lb.	24.15	22.15	19.65
48—¼-lb.	13.70	12.45	10.95
96—¼-lb.	27.20	24.70	21.70

HAIRY CRAB

(Hokkaido "Ke-gani")

	Choice
24—½-lb.	$6.48
48—½-lb.	12.65

Inspection Now Required For Japanese Frozen Tuna

Inspection of frozen tuna for export from Japan, based on study and decision by the industry and the government, became compulsory May 1. As before, the inspection and issuance of certificates will be carried on by the Frozen Foods Export Association, with head office at Shinbashi, Tokyo. For various reasons, under the new compulsory system, the inspection charge is slightly increased. It is hoped that this measure will eliminate trouble from claims.

Frozen Halibut Prices Soggy Thru End of Lent

Halibut selling to the end of Lent—and after— continued the crazy, back-to-bankruptcy course which characterized the trade in recent months.

You could buy frozen halibut, in volume, in Seattle about that time for as little as 18c per lb. for 10-20s; and up to about 22c for the scarcer sizes.

There were still ample inventories, of course; and they were the source of weakness. However, a check among the larger houses indicated the probability that holdings weren't much above normal.

With a May 12 opening for the new season, it will be beyond the middle of May before the first fares can hit the market, and you could hardly get a car together and into Boston before the closing days of May.

Late Lent quotes on the New York halibut market showed a top of 24c per lb. for frozen Pacific goods, laid-down there.

It's too much to expect a primary trade which has been selling frozen goods in New York for prices like that to be very enthusiastic in its bidding when the first flush of the new season's fresh fish trade is dulled by landings that have to find a home in the freezer.

• Now salmon, that's something else again.

Holy Week prices for the light landings being delivered in Seattle hovered right around four bits a pound, *to the fisherman.*

There wasn't enough of it to spread beyond the specialty trade, and it commanded specialty prices.

"Southern Seas" Label On Sea Bass Fillets

Fillets of Mexican sea bass (cabrilla) under the Wilbur-Ellis Co.'s "Southern Seas" label are now being sold from the frozen food cabinets of many groceries.

Cabrilla, taken by hook-and-line in Mexican west coast waters, is processed and frozen in 1-lb. packages by Pesquera de Topolobampo for Marine Products Co., San Diego, which is owned by the Wilbur-Ellis Co. The fish, it is stated, are gutted and bled when caught; immediately packed in ice; filleted by expert craftsmen, and packaged within 24 hours. From 3 to 5 fillets are packed in a 1-lb. Marathon carton, with overwrapers from the Crown-Zellerbach Western Waxed Paper division.

Companion packages under the "Southern Seas" label are frozen fresh jumbo shrimp in 2-lb. Marathon cartons, wax over-wrap; also in 10-oz. packages.

Starkist Tuna Cannery Gets "New Look"

Star-Kist Foods, Inc.'s big No. 4 tuna cannery on Terminal Island has been given a "new look" after more than 28 months of continuous operation since its opening. Improvements include extension of all butchering tables in the fish room, to accommodate more racks; overhauling and painting of the cookers; sandblasting and painting with enamel of the cooling room; renovation of the packing room, and overhauling and painting of the can washer in the processing department.

Chris Paturzo, one of Star-Kist's staff members, was recently presented with an award for outstanding contribution to the company in the form of photography for its house-organ, "Gill and Quill."

New Solubles Plant For Terminal Island

California Marine Curing & Packing Co., Terminal Island, has expanded into the processing of "stickwater" with the formation of a subsidiary, Island Solubles Co., to produce condensed fish solubles. Capacity of the new plant is approximately 1400 lbs. per hour of solubles. Equipment was secured, for the most part, from the South Pacific Canning Co. plant at Long Beach, which is being dismantled because of freeway rights. South Pacific Canning Co. was considered to have been one of the pioneers in the processing of condensed fish solubles.

Laboratory Inspections Check And Certify Quality of Shrimp

● West Coast of Mexico shrimp producers and freezers and their California importers have maintained a high standard of quality in this industry, which has grown to major proportions during recent years.

In addition to quality control at the source, an inspection service for frozen shrimp imported into the United States is available, and is utilized. The Hackney Inspection Laboratory at Terminal Island, Calif., maintains such a service; and the U.S. Food and Drug Administration, of course, conducts regular inspection of all shrimp imported.

● Bulk shrimp from freezers in such ports as Guaymas, Mazatlan and Topolobampo comes in 5-lb. frozen blocks, packaged in heavy-waxed cartons developed by Fibreboard Products, Inc., ten 5-lb. cartons to a case. Inspection cuts one 5-lb. carton from each of approximately 20% of the cases in the shipment, and submits an analytical report to the freezer or importer, or both. Inspection is also made of consumer packages of fresh-frozen shrimp.

Such a report includes a listing of the code number of carton inspected, the count, net weight, quality of the glaze, number of black rings, if any; number of segments; uniformity of size; and odor and color. Also the average count per pound is listed.

Shrimp is classified by count, based on the number of shrimp in a pound. Traditionally, this is the count: under 12; 15, under; 16-20; 21-25; 26-30; 31-40; 41-50; and over 50.

● Inspection's report lists, first of all, the number of shrimp in each 5-lb. carton sampled, plus the net weight of each carton.

Rating of the glaze is based on whether or not the glaze completely encloses the shrimp. Such glaze is secured at the plants by freezing the 5-lb. pack in trays for about 16 hours.

A Coliform test is occasionally made to determine the B-coli content of the water used in the glazing process.

Black rings and tips? If rings do occur in frozen shrimp, they appear at the segment divisions, and are caused by a form of oxidation; they indicate exposure before freezing and glazing, and are an index of condition. Black tips on the scallops of the shrimp, if such there are, are caused by the same conditions as those creating black rings on the body.

Rating on uniformity of size indicates whether the shrimp in each 5-lb. carton inspected are within their count range, as for example, the 16-20 count.

Rating by odor follows the traditional organoleptic examination of fish or seafood to determine decomposition, if such is present.

In inspection's report color rating is determined by the color of the membrane directly beneath the shell. A color such as orange in such areas would be an indication of decomposition.

Color of the shells may range from a grayish white to a pinkish gray or blue. The meat of shrimp is white, a color preferred by the public.

The averages arrived at by inspection, based on the 5-lb. carton sampled from each case, are of value to the freezer and importer, since they indicate (1) the average count per carton, the average net weight of the lot sample; and (2) if there are black rings and spoiled segments, etc., the extent and degree of the deterioration. An average of the latter rating is in the form of percentages of the number of cartons sampled.

Major importers of West Coast of Mexico shrimp, such as Marine Products Co. and Crest Importing Co., San Diego, and Koulouris & Casaretto and A. R. Lantz Co., Los Angeles, utilize the inspection service.

"Asama Maru" Trawling In Bering Sea

To trawl and freeze an estimated 600 tons of bottom fish, Nippon Yusen K.K.'s 1,000-ton trawler left Tobata, Kyushu, the middle of March, arriving in eastern Bering Sea ten days later. After 40 days of fishing, she is expected back in Japan by late May. Last year this vessel made two trips to Bering Sea waters off Alaska.

New Organization Of Japanese Exporters

In line with recent more vigorous enforcement of Japan's law for promotion of industries dealing with marine products for export, a new nation-wide organization called Japan Export Frozen Marine Products Manufacturers Association has been formed, which is expected ultimately to take over the principal functions of the present Japan Frozen Foods Exporters Association.

Pretty Pack — Peeled and de-veined frozen shrimp offered by Crest Importing Co., San Diego, in a 5-lb. package specially for the institutional trade.

New Shrimp Package Featured by Crest Co.

With the introduction of a new pack of frozen Mexican shrimp, Crest Importing Co., San Diego, is making the preparation of shrimp easier for the restaurant and institutional trade.

The new 5-lb. package, under the "Crest" and "Compass" labels, is peeled and deveined shrimp, graded in sizes U/20; 21/26; 27/31; and 32/40.

Crest Importing Co. is emphasizing that peeled and deveined shrimp provides 20% more shrimp, and the labor of preparation is reduced; it is necessary only to thaw and the shrimp ready for use.

In the Los Angeles area, Jack Powers is calling on the restaurant trade for Crest Importing Co., which is headed by J. W. Willis.

Five Shrimp Boats In Juneau Fleet

Three dragboats were added March to the fleet delivering shrimp for the joint operation of the Kaylor Dahl Fish Co. and the Juneau Cold Storage Co. at Juneau, making a total of five. A crew of 50 was employed in the plant.

Ota Moves Office

James T. Ota, manager of the Ori Trading Co., announces the move his office to 656 S. Alameda St., L Angeles. The company is an import and exporter of fish products, and se frozen swordfish under the Or label.

LINES and LEADERS

White Motor Buys Diesel Div. of National Supply

White Motor Company of Cleveland this spring purchased for cash the engine division of the National Supply Company. In a joint statement, Robert F. Black, president of White Motor, and A. W. McKinney, president of National Supply, said: In 1954 the division reported a volume of business in excess of $10,000,000.

National Supply will serve as sales distributor throughout the world of engines made by White's Diesel Engine Division, the company feeling it was in the interest of National Supply to dispose of the engine manufacturing operations and aggressively expand its engine sales.

White Motor intends to continue the operation and activities of the engine property as its Diesel Engine Division and to expand and develop a more complete line of engines to supply the volume markets for smaller sizes.

In this connection, White Motor plans to add its line of heavy-duty, light-weight, high-speed diesel engines in the 100 h.p. to 400 h.p. range "which will give the new division access to new markets in the industrial, earth-moving, agricultural and marine fields.

White's new Diesel Engine Division plant in Springfield, Ohio, is one of the country's major producers of diesel engines, of medium and slow-speed, heavy-duty types, marketed internationally under the trade names of **Superior** and **Atlas**. The **Superior** line is particularly well-known for its use in the oil fields and in the marine and industrial fields, while the **Atlas** is popular in the fishing industry and on inland waterways. Production of both lines will be continued.

White Motor, a large producer of trucks and tractors, has been carrying on a diesel research and development program for truck and industrial engines in its own engineering facilities in Cleveland. The company intends to move this phase of its activities to Springfield, Ohio. He added that he expects the company's new light-weight, heavy-duty diesel engines will be in production by the end of 1955.

In the transaction, White Motor would acquire, besides a modern manufacturing plant, sales and service facilities in Springfield, sales representation in Pittsburgh, Pa.; Oakland, Calif.; Washington, D. C.; Chicago, Ill.; Wichita, Kan.; New Orleans, La.; Gloucester, Mass.; Park Rapids, Minn.; St. Louis, Mo.; Fort Worth, Tex.; and Casper, Wyo. In addition, the division has sales and complete service centers in Portland and Astoria, Ore.; Halifax, N. S.; Houston, Tex.; Ketchikan, Alaska; New York; Seattle, Wash.; Terminal Island, Calif.; and Vancouver, B. C.

Cincotta Handles New Rubber Bearings By Byron-Jackson

Cincotta Bros., San Francisco and Monterey, fishermen supply and equipment house, has been appointed a distributor for the Byron Jackson line of **BJ** water lubricated bearings, according to Tony Cincotta, owner of the company.

BJ bearings, resilient molded rubber lining, bonded to a heavy brass case, reduce abrasive wear, stop noise and vibration, outwears all ordinary bearings, absorbs shock loads, and requires no packing, according to Mr. Cincotta.

* * *

Hover Equipment Co., Monterey and Moss Landing, recently installed General Motors 3-71 marine diesel engines in the **Little St. Anthony**, Giammanco brothers; **Conte di Savoia**, Sal Pattania; and **Marie & Ida**, Cosimo Cricchio.

New Manual Describes Exide-Ironclad Batteries

Ability of Exide-Ironclad batteries in marine service to deliver ample, dependable power in emergency situations is stressed in a 12-page Exide manual.

The manual describes Exide's research laboratories where exclusive new alloys, active materials, sealing compounds, coatings, separators, plastics, and manufacturing and control methods have been developed, and tells how these improvements have been applied to Exide's unique slotted-tube-design positive plate.

Of interest to all users of marine batteries are a diagram and a description of the Exide marine floating battery system, used successfully for many years on fishing craft, towboats, etc. This shows how generators and their engines can be operated under steady, uniform load conditions by permitting the battery to absorb load fluctuations.

Fully illustrated and printed in two colors, the 8½ x 11-inch manual may be obtained by writing Exide Industrial Division, The Electric Storage Battery Co., Box 8109, Philadelphia 1, Pa., requesting "Exide-Ironclad Batteries for Marine Use," Form 5190.

Ray F. Egner

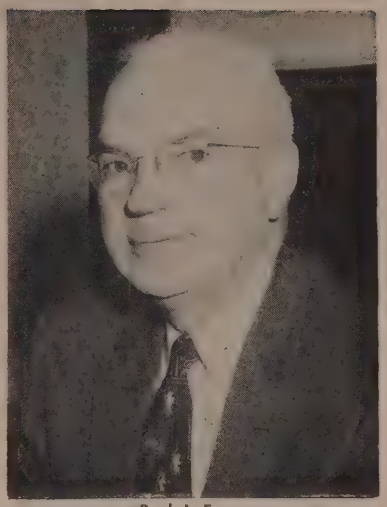
Pacific Marine Supply Co. Promotes Ray Enger

Robert D. Ladd, vice-president and general manager, Pacific Marine Supply Co., Seattle, announces the appointment of Ray F. Egner as general sales manager. Egner has previously been in charge of dealer sales, and prior to that represented Pacific Marine Supply Co. in eastern Washington. He formerly operated a sporting goods and boat sales store at Bellevue, Wash.

Department heads announced by Ladd include W. K. Sheldon, Jr., manager Alaska sales; Allen Ingraham, manager steamship department; Milton A. Dalby, manager fisheries department; C. W. Jones, manager Mercury outboard motor department; E. J. Engelhardt, manager fire fighting equipment department.

* * *

Geraldine Joncich, daughter of the owner of the **Pioneer**, San Pedro purse seiner, has been elected a member of Phi Beta Kappa, scholastic honorary, at the University of California at Los Angeles.



Paul J. Every

P. J. Every Appointed To New Cummins Engine Post

Appointment of Paul J. Every, a veteran of 20 years of selling and management experience, to the newly-created post of assistant general sales manager of the Cummins Engine Co., Inc., Columbus, Ind., is hailed by C. R. Boll, Cummins' general sales manager, as a step in the strengthening of the organization.

Mr. Every has been with Cummins since 1947; as manager of regions he was in charge of the 12 domestic regional offices and the handling of domestic distributor activities, and for the last two years he has been responsible for the world-wide activities of Cummins Diesel Export Corp. Before joining Cummins he was sales manager of Baldwin Locomotive Works' heavy equipment division.

Caterpillar Electric Sets Available in Ten Models

Caterpillar Tractor Co. has announced it is now offering a complete line of 10 easily portable mobile and skid mounted diesel electric sets. For almost three years, Caterpillar's Mobile Electric Set has traveled throughout the country as a public service unit answering emergencies, as well as demonstrating its usefulness to provide power for a variety of electrical uses and giving Caterpillar a proving ground to perfect this new type of mobile power.

Caterpillar has announced the availability of four units patterned after this big Mobile Electric Set, which is mounted on a van-type tractor trailer. Five smaller units are being offered as skid mounted packages. In addition, there is one specially mounted electric set, originally designed for the Air Force, now being offered for general sale.

The four trailer mounted units are designated as Caterpillar D397, D386, D375 and D364 Mobile Electric Sets. In these four units Caterpillar offers a wide range of electrical power—300 KW in the D397, 230 KW in the D386, 200 KW in the D375 and 155 KW in the D364.

All four of these large Cat Electric Sets are also available with steel channel skid bases.

The five smaller units are designated as Caterpillar D337, D326, D315, D318 and D311 Skid-Mounted Electric Sets.

In these units, the power ranges from 116 kw, in the 1200 rpm, 60 cycle, D337, to 18 kw in 1000 rpm, 50 cycle D311 Electric Set. Each skid-mounted electric set is offered with a choice of 60-cycle or 50-cycle, voltage and phase. Generators are either self-regulated or externally-regulated.

* * *

Stanley L. Cocks, Union Fish Co., San Francisco, is back at his desk following an extended business trip to the Hawaiian Islands.

Graymarine Service On L. A. Harbor

John Pope Marine Services has been appointed Graymarine sales and service dealer in the San Pedro-Wilmington harbor area by the Charles E. Smith Co., Los Angeles, Graymarine distributors for many years.

Mr. Smith reports an interesting installation in a twin-hulled workboat of twin Graymarine 200s. The vessel is under construction by the McClary Twin Hull Boat Co. in Lynwood. Reduction is 2½:1.

* * *

Vito DiMercurio, Berkeley, has been appointed fish boss by Red Salmon Co., Seattle, for its operations in Bristol Bay. Mr. DiMercurio takes the place of the late Angelo D'Acquisto, who was fish boss for the company for over 40 years. Vito had been working with Mr. D'Acquisto for the past several years.

* * *

Miss Mary Torrente, daughter of Mariano Torrente, skipper of the Monterey purse seiner, **New Vagabond**, and Mrs. Torrente, was married in the Monterey San Carlos Church to James V. DiMaggio, Jr., Pittsburg, Calif.

* * *

Salvatore and Buenaventura Mineo, brothers of Frank and John Mineo, well known Monterey purse seine skippers, have arrived in California from Marettimo, Italy. They will fish on the **Mineo Bros.** and **Providenza**, skippered by Frank and John respectively.

Plastic net floats and needles of the Shepherd line are gaining wide use and appreciation among American fishermen.

Plastic Floats Available For Every Net Type

J. H. Shepherd Son & Company of Elyria, Ohio, announced a complete new line of plastic floats and needles for the commercial fishing industry. According to the manufacturer, the new line is designed for fishing operations in all parts of the world.

An exhaustive research survey of the requirements of fishermen from coast to coast and including the inland fishing areas has been made, according to I. L. Shepherd, company president. From this survey the complete Shepherd line of "Duro" plastic floats and "Flexo" needles has been developed. Each float and needle is especially designed for a specific fishing requirement, and into each float model has been incorporated the maximum in buoyancy, corrosion, weather and impact resistance, durability, visibility, fast-easy attachment, and color fastness.

Special features for specific fishing conditions include the ability to withstand extreme pressure in deep water ocean fishing while surface buoys are compartmented for extra buoyancy and impact resistance.

Shepherd floats and plastic mending needles are now exported to nearly every foreign fishing port in addition to the domestic market. The company invites inquiries, and frequently works out special or individual requirements, according to the officials of the firm.

Death of Mrs. D'Amico

Mrs. Mary D'Amico, bookkeeper at the F. Alioto Fish Co., San Francisco, who died last month, was a cousin of Sal Tarantino, F. Alioto and Tom Lazio, partners in the company, and a relative of a number of others prominent in the San Francisco fish business. She leaves a son, John.

Hitting on All "6"

"6" Aggressive Salesmen Building Canned & Frozen Seafood Brands in CHICAGO & MIDWEST. Sales efforts second to none for aggressive producers.

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FRESH SALMON
FISH FILLETS

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SMALL, LIGHTWEIGHT GIANT

The original Northill lightweight anchor disproved an ancient concept that had lasted 4,000 years... that only a heavy anchor could hold a boat. The scientifically-designed Northill was small, easy to handle, but a giant in holding power. That's why it has been the largest-selling lightweight anchor for 17 years! 3 to 105 lbs. For boats up to 80 ft.

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Skin-Divers! See the new precision-built Northill Air Lung!

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·ul Shoudy Acquires Control f Materials Handling Equipment

Specializing in fork lift trucks and equipent for handling materials and goods in nneries, cold storages, fish houses and her aspects of the food packing business, ntrol of Materials Handling Equipment ., Inc., Seattle, has been acquired by ul A. Shoudy, an experienced sales and echanical engineer. Address is 2963 First ve., South.

The company has exclusive representaon for the Buda Division of Allis-Chaers Manufacturing Co. on fork lift trucks, actors, etc.; and Barrett-Cravens Comny, Saginaw Products Corporation, Hyoway Scales, Inc., Metzgar Conveyor o., Beacon Machinery Co., Goodyear Tire Rubber Co. (exclusive on industrial tires nly), and various other types of material andling equipment.

They also handle on a dealer basis the roducts of 20 well-known manufacturers f such equipment.

Following his graduation as a mechanial engineer from the University of Washngton in 1938, Mr. Shoudy was employed s such an engineer by Boeing Airplane o. and the Kirsten Pipe Co. In 1947 he oined the Container Corporation of Amrica, which he served as a salesman for ree years. For the past four years he as been plant manager of the Seattle perations of the Container Corporation, position which he relinquished upon equiring control of Materials Handling quipment Co.

PAUL A. SHOUDY

Dusty Rhodes equipped his trawler **St. Mary** with a Bendix automatic pilot as did Henry Clauson of the **Etta Jean.** Jerry Lewis put a Bendix depth indicator on his **Sea Siren.**

"Cat" Service and Equipment Featured in New Booklets

Service available to Caterpillar owners and special information about Caterpillar fuel injection are set forth in two new booklets issued by Caterpillar Tractor Co., Peoria, Ill.

An 8-page booklet, "Your Job — Your Equipment—and Caterpillar Service" (designated as Form No. D522), indicates the facilities and skill of Caterpillar dealers to keep their customers' machines going—service immediately available by phone call, with special attention by factory-trained servicemen with modern equipment.

The other, entitled "Six Money-Making Facts About Caterpillar Fuel Injection Equipment" (Form No. DE580) explains what's behind the production and design of modern injection equipment, discussing interchangeability of parts, ease of maintenance, adjustment-free design, and ability to burn non-premium fuels. This booklet may also be had in Portuguese, Spanish or French.

These booklets may be obtained from any local Caterpillar distributor, or by mail (stating form number) from Caterpillar Tractor Co., Peoria, Ill.

Chris-Craft Appointments

Jay W. Smith, president of Chris-Craft Corp., announces the appointment of Wayne Pickell as vice-president in charge of sales; A. William MacKerer, vice-president in charge of manufacturing; Jay C. Smith, vice-president in charge of procurement; and Harry H. Coll as vice-president in charge of the Holland (Mich.) division.

Fishing Vessel REFRIGERATION

TRADE FRICK MARK

. . . The Choice of Experienced Fishermen!

Rely On Baker Engineering Corporation. . . . Parts and Service in the fishing fleets for 25 years.

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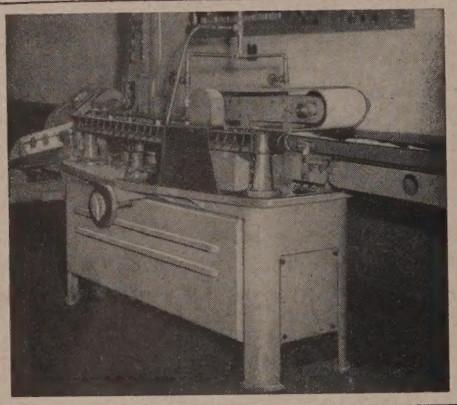

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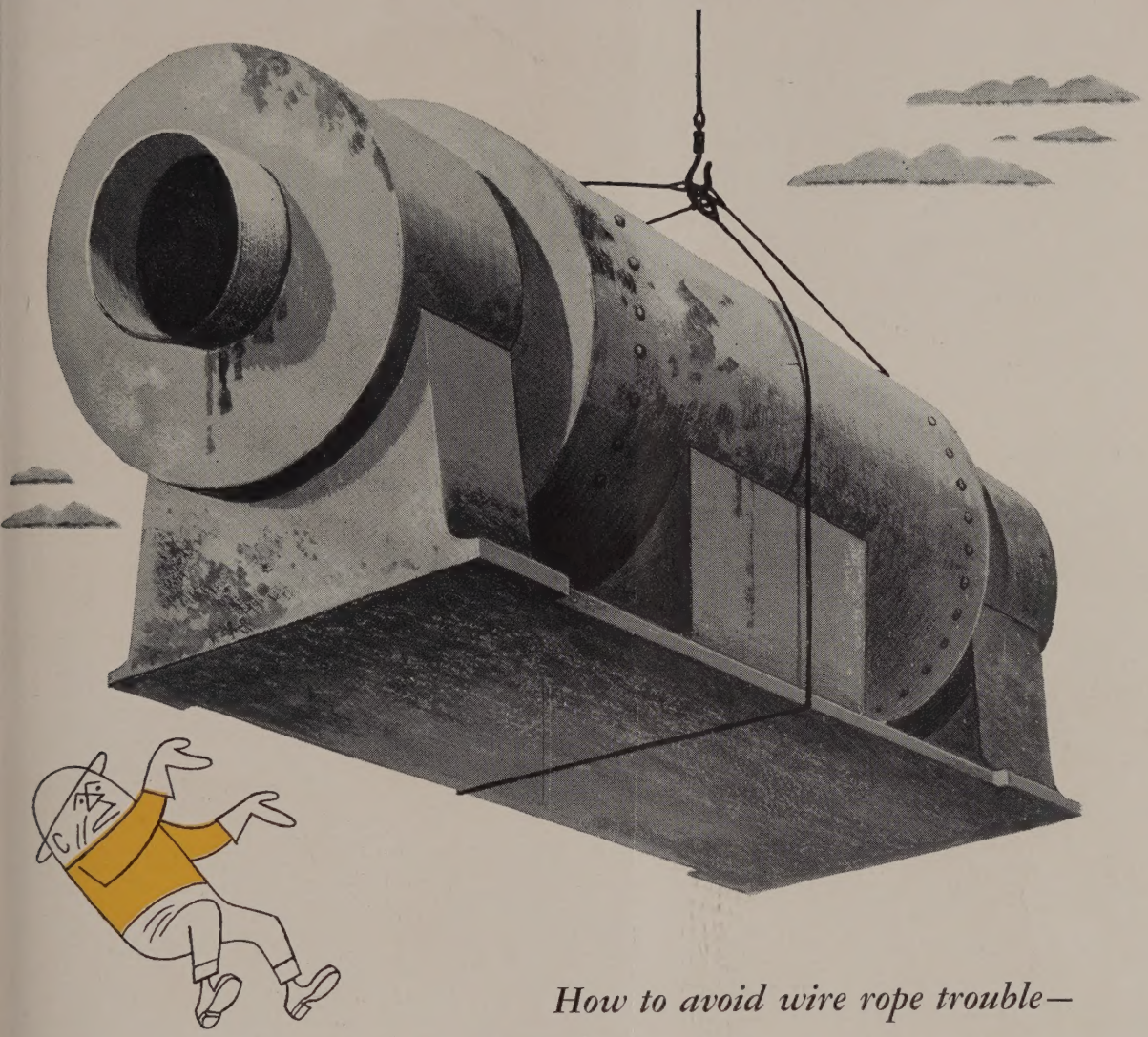

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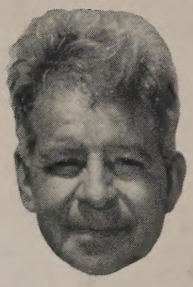

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